

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2255.—VOL. XLVIII.

LONDON, SATURDAY, NOVEMBER 9, 1878.

[WITH SUPPLEMENT.] [PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.]

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
No 1 FINCH LANE, CORNHILL, LONDON, E.C.
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BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

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MINES INSPECTED.

BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—
25 Betts y. Coed. 25 Hultafall, £23½. 140 Pestarena, 4s. 3d.
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25 Chontales, 12s. 20 Leadhills, £2. 10 Roman Grav., £2½.
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25 D'Eresby Consols. 25 Morfa Du, 14s. 250 Talylont (offer wtd.)
25 East Van, £2. 25 Pant-y-Mwyn. 15 Tankerville, £23½.
25 Flagstaff, 9s. 50 Penruthal, 4s. 3d.

* TIN SHARES and the IMPROVEMENT in TIN. Special Business in all the leading shares.

SPECIAL BUSINESS in BANK and GAS SHARES.

* SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

FOREIGN BONDS.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS.—HOME AND FOREIGN.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

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Alhambra Palace. ditto Preference. North Metropolitan
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20 Grogwinion, £23½. 25 Pennant.
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50 Glenroy, 9s. 9d. 150 Pestarena, 4s. 3d.
110 Green Hurth. 50 Penhalls, 12s. 6d.
20 Hultafall, £23. 50 Pant-y-Mwyn.
20 Hornachos, £12½. 15 R-d Hook, £23½.
125 I.X.L., 4s. 150 Rossa Grande, 1s. 9d.
20 Kitchen, 18s. 20 St. Francis, £24½.
20 Llanyrwst. 50 Wheel Uny, £14.
20 Marke Valley, 12s. 40 Wye Valley, £23½.
20 Penruthal, £23. 40 Wye Valley, £23½.
20 Parys Mount, 5s. 6d. 40 Wye Valley, £23½.
20 Parys Mount, 5s. 6d. 40 Wye Valley, £23½.
20 Parys Mount, 5s. 6d. 40 Wye Valley, £23½.

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Grogwinion. West Chiverton, 25s. Flagstaff, 8s.
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Leadhills, 12s. 6d. Gas Light and Coke. Hultafall, £2.
Llanyrwst. Imperial Continental. Javali, 7s. 9d.
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50 Don Pedro, 9s. 50 Javali, 7s. 15 Richmond, £10 2s. 6d.
50 Exchequer, 5s. 75 Kapanga, 21s. 25 Sierra Buttes, 35s. 9d.

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CLAUSTHAL MINING SCHOOL NOTES.—No. XCV.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,

Mining Engineer, Wakefield.

(Formerly Student at the Royal Bergakademie, Clausthal).

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SECTION V.

The following are examples of circular shafts. Fig. 7 represents

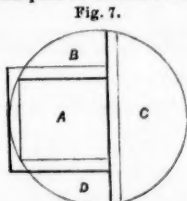


Fig. 7.

the shaft at the Dahlbusch Colliery, near Gelsenkirchen, sunk by the method of Kind and Chaudron. The shaft is 11 ft. 2 in. (3.505 metres) in diameter. A is the winding shaft, B is the travelling shaft, C the pumping shaft, and D the ventilating shaft.

Fig. 8 the plan of the winding shaft of the Monkwearmouth

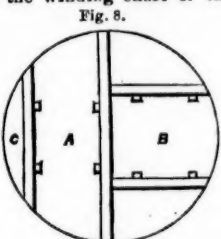


Fig. 8.

Colliery, near Sunderland. The diameter near the mouth of the shaft is 11 ft. 8 in., and enlarges to 13 ft. 6 in. below. A and B show the two winding partitions, and C was formerly used as the pumping shaft; it is now used as a rope shaft for an underground haulage rope, worked by an engine at the surface.

Fig. 9 is the plan of the shaft of the Hibernia Colliery, near to

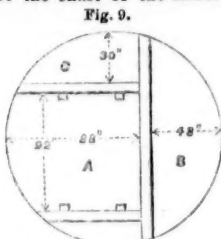


Fig. 9.

Gelsenkirchen, in Westphalia. The shaft is 11 ft. 8 in. in diameter. A is the winding compartment, B the pumping compartment, and C the travelling shaft.

Fig. 10 is a plan of the Ferry Hill Colliery, near Durham. A and

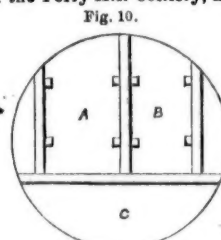


Fig. 10.

B are the winding divisions, and C the pumping shaft.

Fig. 11 represents a plan of the Shamrock Colliery, near Herne,

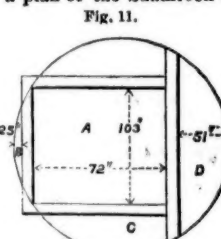


Fig. 11.

in Westphalia, which is 12 ft. 8 in. in diameter. A is the winding shaft, B is the travelling shaft, C the ventilating shaft, and D the pump shaft.

Fig. 12 also represents one of the shafts near Herne, in which A

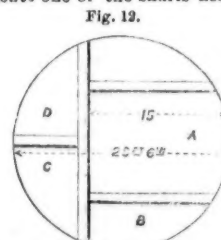


Fig. 12.

is the winding, B the travelling, C the pumping, and D the ventilating shaft.

Fig. 13 represents the arrangements of the shafts at the state

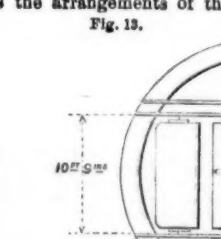


Fig. 13.

coal mines, King's Colliery and Queen Louise's Colliery, in Upper Silesia. At the latter colliery the shafts are placed 6 1/2 ft. apart. The two shafts are respectively 17 ft. 6 in. and 13 ft. in diameter.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergmann Dr. von Guondreck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

The latter serves not only as winding but also as upcast shaft, so that in this shaft the conductors consist of wire ropes. The arrangement shown in the smaller shaft is very common in some parts of England. The large winding shaft is arranged with conductors of T-iron for four cages. The bearers for carrying the conductors serve also as support for the 18-in. pump sets (a), the water being raised by engines underground, so that there are no rods in the shaft.

Fig. 14 represents the plan of the Abercarne shaft, South Wales.

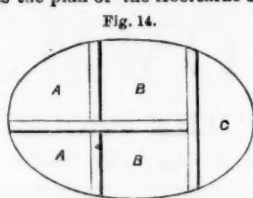


Fig. 14.

The shaft is elliptical, the longer diameter being 22 ft. long and the shorter 16 ft. long. A and B are winding divisions, and C is the pumping department.

THE WALLING OF SHAFTS.

The walling of a shaft becomes necessary either for the purpose of keeping back loose portions of the ground which would otherwise be liable to fall down the shaft, and where the ground is greatly affected by the weathering action of the atmosphere to prevent the formation of large empty spaces, which would allow of so great a falling in from the sides as to endanger the safety of the shaft. In other cases, especially where the shaft is deep, the chief purpose of the walling is to give a support against the great pressure of the sides. Metalliferous mines usually have the shafts kept open by means of timbering. Where the shaft will probably have to be kept good for a very great length of time, and where the cost of renewal of timber is excessive, it may become advisable to resort to walling, even in the inclined rectangular shafts of metalliferous mines. The descriptions of walling vary somewhat according to the angle of the dip: where the inclination of the shaft does not deviate more than from 5° to 10° from the vertical the methods to be later described for vertical rectangular shafts may be adopted.

According to local circumstances, it may be required to wall the shaft on one, or more, or all four sides. Where only two sides require walling this will in general be effected by building two vertical side walls. The object of walling the two sides in metalliferous mines may be either to keep the hanging and lying walls apart in the neighbourhood of the shaft, or to support the vein, or where the lode has been completely worked out the attle packing. As a rule where the lode is not worked in the vicinity of the shaft there will be no need for a side wall for either of the above purposes. Towards the upper part of the lode, where it has been subjected to the weathering action of the air and moisture, its texture may be so loose that a side wall is required simply to protect the sides from falling in. The walling of the two short sides of a rectangular shaft may, therefore, have to oppose either a thrust in the direction of the wall or one at right angles to it. In the first case the lining may consist of a plane wall, with two parallel sides: the only points requiring notice in such a case are the direction in which the bricks are laid, and the footing for the wall where a level enters the shaft. The bricks may be laid at right angles to or parallel to the hanging and lying walls of the lode, or perfectly horizontal; this latter entails the cutting of the sides of the lode in a stepwise fashion, to provide a good sound footing for the wall. Where a level joins the shaft the wall will be built upon an arch footed into the hanging or lying walls. Where the pressure at right angles to the wall is considerable the outer side of the wall will be built convex, or the wall itself may be altogether curved in the same way. The masonry used in rectangular shafts is seldom carried uniformly over the whole depth of the shaft, but is put in section where needed. When the height or depth of the side walls is considerable, and especially where the dip of the lode is nearly vertical, a great weight is thrown on the lower part. To relieve the lower part of this pressure, and to distribute the pressure more equally over the whole length of the walling, arches are built in the wall at regular intervals, and being footed into the sides, the weight of the wall above the arch is not transmitted to the portion of the wall below the arch.

When the hanging wall of the lode requires lining this may be effected in two ways. Where the side pressure is inconsiderable, and the chief weight to be supported acts in a vertical direction downwards, the hanging wall may be supported by a series of vertical arches, footed into the two short sides, a cross section of the shaft, shearing the arches in a stepwise arrangement, and a longitudinal section will show a series of arches placed one above the other at equal distances apart. Where the side pressure (i.e., of the hanging wall) is considerable the walling would consist of a plane arched wall, the rise of the arch being 1 1/2 in. to 2 in. per foot of span. The arch is seldom made semicircular, generally of the above curvature. Sometimes the arch lining of the hanging wall is still further supported by a centre wall, dividing the shaft into two partitions. Such a centre wall is supported by building arches in the walling, the chord of the arch being placed approximately at right angles to the general inclination of the shaft, often in a slightly more vertical position.

The walling of VERTICAL shafts is effected in two ways. When the ground in which a pit has been sunk is of such a character that it will stand good without any, or but a slight temporary wooden lining until the shaft has been sunk to the bed it was intended to reach, then the walling of the shaft is delayed until the completion of the sinking of the shaft, when the wall is built up from (and commencing at) the bottom. The second mode is used where the character of the ground and the consequent pressure on any temporary timber lining is such that the probability is that the ground will break through the timber, or that the water would be liable to wash and loosen large portions of the sides of the shaft if left otherwise unprotected during the whole time of sinking the shaft. The object of this second method is to secure the sides as soon as convenient or necessary after being exposed by the sinking of the shaft. This method consists in sinking the shaft to the depth which it is considered advisable to advance before it becomes necessary to line the shaft, and then to build the shaft lining up to the surface or to the bottom of the last completed set of walling, the shaft being lined (in general) by building the wall downwards—first the surface portion, and afterwards the others, each set of lining, however, being built upwards in detail. The first method we shall call the lining of the shaft from the bottom upwards, or upward walling, and the latter the sectional walling from above downwards.

1° UPWARD WALLING.—When the nature of the ground in which a pit is being sunk is such that the sides will stand good with but little or no timbering, the walling may be carried from the bottom to the surface in one operation. The first care after such a shaft has been sunk, or during the sinking, will be to choose strata sufficiently strong and compact to serve for a foundation for the walling. When strong rock has been reached the shaft, if not sufficiently deep in this compact rock, will be sunk several yards further, and a suitable ledge or foundation for the wall will then be carefully cut in the rock by means of a pick, or hammer and chisel. This ledge must be made sufficiently broad for the foot of the wall, which is in general at least twice as thick as the ordinary thickness of the lining. Since the whole weight of the wall comes upon the foot, this must be of a suitable form and strength. In Westphalia considerable attention has been paid to the form of the wall foot. The most usual form is that of a double truncated cone; the diameter of the outside of the foot at the truncated ends equals the outside diameter of the brick lining; sometimes the outside diameter of the bottom end of the foot is larger than the above. The diameter of the foot at the widest part exceeds the diameter of the outside of the shaft lining by twice the thickness of the lining. The generating angle of the upper cone is much more acute than that of the lower cone—i.e., the length of the upper part of the foot (down to the level where the outside diameter is greatest) is from five to six times greater

than the length of the lower part (from the level where the outside diameter of the foot is greatest down to the dressed surface of the rock forming the foundation). For a shaft 15 ft. in diameter, assuming the thickness of the lining at 1 ft.—the exterior diameter of the lining as 17 ft., the outside diameter of the foot where it is strongest as 19 ft.—the above relative lengths of the upper and lower portions of the foot would be about 10 ft. and 18 in.

THE UNIVERSITY OF ADELAIDE.

Although in comparatively young and newly-settled countries but little inconvenience may at first be felt by those of naturally refined tastes and superior attainments, owing to the novelties and excitement by which they are surrounded, and the readiness with which the absolute necessities of life are obtainable, the time soon comes when the brighter intellects yearn for the opportunity of associating and exchanging ideas with others of similar feelings, and when parents begin to dread the thought that their offspring should grow up without those softening influences of that higher education which would be regarded as indispensable to their social position in older States. Great as may be the exertions and the ability of private instructors who may be at the disposal of the colonists, they cannot remove the necessity for systematic effort, such as is secured by the college and university, so that the provision by such colonists of facilities for the acquisition of complete academic training in their midst cannot but be regarded as an evidence of substantial progress, and of the desire that their adopted home should at a future time occupy an honourable place amongst the nations of the world. With regard to Australia, reference has already been made in the *Mining Journal* to the Universities of Melbourne and Sydney; and it is gratifying to find that the University of Adelaide has now reached a stage when some opinion may be formed of its probable future and of the character of its teaching.

The unparalleled success which marked the progress of the university of a sister colony not unnaturally led those interested in the establishment of the University of Adelaide to adopt a similar course of procedure, and so far equal success appears to have been achieved. The University of Adelaide was incorporated and endowed by Act of the Colonial Legislature in 1874, so that the calendar for the present year is the first which admits of a fair estimate being formed as to what has been done. The university is a teaching university, and the 14th section of the Act wisely provides that "no religious test should be administered to any person in order to entitle him to be admitted as a student of the said university, or to hold office therein, or to graduate thereat, or to hold any advantage or privilege thereof;" whilst the 12th section gives the university power to confer after examination degrees in Arts, Medicine, Laws, Science, and Music, and further provides that graduates of other universities may be admitted *ad eundem gradum*. In pointing out the advantage of this provision in another place it was remarked that it afforded facilities for giving to all engaged in the development of the university an honourable position therein, which ensured far greater personal interest in its welfare than could have been hoped for had the management of the university been entrusted to merely menial professors and examiners whose connection with the corporation would terminate upon their ceasing to hold office, and it was added that the same proviso enabled the corporation to enlist the sympathy of all the more energetic university men connected with the colony by offering them corresponding rank, the result being that the university quickly became the centre of learning and polite society for the colony, as much as are Oxford, Cambridge, and Dublin in the Mother Country—a position which it is likely long to enjoy to the mutual advantage of the colony, of the university, and of the graduates who have become identified with it by incorporation under this section, and who in turn reflect a lustre on the university which is most advantageous thereto. It would be unreasonable to expect that a university but four years old could occupy a similar position; but to judge from the manner in which its affairs have hitherto been conducted it will speedily attain a no less enviable rank.

With regard to the endowment of the University of Adelaide, it appears to be ample, with such voluntary endowments and bequests as may reasonably be expected hereafter to ensure success. Mr. Walter Watson Hughes, of Torrens Park, near Adelaide, may be regarded as the real founder of the university, for it was he who nearly two years before the Legislative Act establishing the university was obtained signed an indenture, giving the handsome sum of 20,000, to endow two chairs—the one of Classical and Comparative Philology and Literature, and the other for English Language and Literature, and Mental and Moral Philosophy. Indeed, it was Mr. Hughes' noble contribution that encouraged the Legislature to pass the Act of incorporation and endowment. The Governor of the Province is authorised to convey to the university the fee simple of 50,000 acres of waste lands, and of 5 acres of land in Adelaide for the university buildings, whilst for the current expenses he may grant by warrant 5 per cent. on Mr. Hughes' contribution, 5 per cent. on the value of real or personal property vested in the corporation, such grant to be not more than 10,000, per annum. For this amount the colonists will receive a good return for their money, for already the executive have shown their energy and judgment in the number and selection of their teaching staff to whom the students are entrusted. His Excellency the Governor is the Visitor; the Right Rev. the Lord Bishop of Adelaide the Chancellor; and the Hon. S. J. Way, Chief Justice of South Australia, Vice-Chancellor. The Hon. Sir Henry Ayers, K.C.M.G., whose name is familiar to the readers of the *Journal* from his long and useful connection with South Australian mining, is the treasurer, and the names in the council afford every evidence of strength and energy, whilst on the professorial board includes such names as those of the Rev. Henry Read and the Rev. John Davidson, two ministers and scholars well known in the colony; Prof. Horace Lamb, who is a sound mathematician; and Prof. Ralph Tate, whose intimate acquaintance with natural science will be remembered by those who only a few years since were in the habit of frequenting the meetings of the scientific societies of London. The Registrar and Acting-Clerk of the Senate is Mr. William Barlow, B.A., whose name appears on the list of Bachelors of the University of Adelaide for 1877; and everything connected with the Corporation appears to be well and systematically carried on.

With regard to the character and scope of the instruction given it is probably from the examination papers that the best opinion can be formed, and these are certainly in every way satisfactory. Both the Matriculation and Bachelor of Arts papers—at present the university is too young to have had any candidates for higher degrees—are carefully set and well calculated to test the student's ability; and, what is the more satisfactory, they leave no doubt that the Senate have decided upon the standard which shall ensure the students who receive degrees from the University of Adelaide being well able to hold their own amongst those of corresponding rank elsewhere. The university has undoubtedly commenced its career well, and as no necessary expense seems to be spared to provide thoroughly competent professors, and plenty of them, paying them at the same time such salaries as shall encourage them to exert themselves to their utmost, to collect a good library, museums, and laboratories, and to do all else that is requisite, its continued progress will be watched with much interest both in the colony and in the Mother Country.

THE CHANNEL TUNNEL.—The reason why the Channel Tunnel Company recently ceased their operations in St. Margaret's Bay is stated to be that when the reports as to the soundings between Sangatte and St. Margaret's Bay were handed in by the surveyors it was found that to cut a tunnel between those points would entail an enormous amount of work in sinking. The site in question has therefore been finally abandoned. The scheme now before the company provides for the sinking of a new shaft at or close to Dover. The site on the French side at Sangatte, near Boulogne, is still looked upon as the best that could be chosen for the commencement of the tunnel. The shaft sunk there is already 70 metres in depth, with a diameter of 2 metres, and the engineers consider that when they have got 10 metres further down the horizontal cutting may be commenced. The engineers of both countries agree that the French opening of the

tunnel is the most difficult part of the undertaking, as a clayey soil has to be dealt with instead of chalk, and the incursion of water causes much trouble.

CORNWALL MINING INSTITUTE.

The Cornwall Mining Institute, the value of the operations of which is steadily becoming more and more recognised, has this week held its second annual exhibition of mining machinery and accessories, and of miscellaneous articles of kindred character, at the Assembly Rooms, Camborne. Thanks to the labours of the secretary, Mr. Provis, and his coadjutors of the committee, a capital lot of exhibits were brought together, and a very interesting and useful exhibition was the result, as our notice of the principal articles sent will show.

Just at the present juncture the boring-machines are certainly entitled to the first place, and in this conviction the chief feature of the exhibition was the competitive trial which took place at Dolcoath, and to which we cannot, as it was not concluded until somewhat late on Thursday, now refer in sufficient detail. We hope, however, to do so next week. There was nothing absolutely new in the machines which put in an appearance, some which had been expected not turning up. Messrs. Hathorne and Co., Fardon, sent the Eclipse, recently medalled in Paris, and a model of their excellent Reliance air-compressor. The Eclipse was shown with the latest improvements, as it was brought forward at the Polytechnic, where it did such capital work, and obtained a first silver medal. Messrs. Brydon and Davison, whose drill is of a peculiarly massive character, and withal notably low in price, sent one which has sundry modifications on the machine forwarded by them last year to the exhibition of the Institute, and which then, by some delay, arrived too late for the trial. The Diamond Rock-Boring Company exhibited a machine from Carn Brea, which has been in constant work for four years, with the object of showing how little it had been affected by wear and tear. It will, of course, be understood that this is not a diamond, but a percussive drill. This machine was not entered for trial, those which were being the Eclipse and Brydon, with the Barrow, now in operation at Dolcoath, South Crofty, West Tolgus, and elsewhere; and the McKean, which is working at South Rose-kear. The diamond, percussive, Barrow, McKean, with the Jordan hand-borer (Mellaneer), and the Ullathorne, recently started, comprise the drills now at work in the county. All have their merits, to apply a recent remark of Mr. Richard Taylor on this subject, and the Mining Institute is doing good work in helping the mining community to discriminate as to which may be the most advantageous generally, and in special situations and for special purposes.

Economy in the operation of pit work is one of the great desiderata of the present day. There is no doubt that much of the apparent falling off in the duty of the engines is due to the change that has taken place in the character of the pitwork. Not only are mines deeper, and the power required to operate the pitwork in excess of the proportionate amount needed in former days, but miners have to deal with shafts of a more difficult character, not merely on the underlie, but often exceptionally crooked, the awkwardness of which extension in depth greatly enhances. It is the custom now to use rolls to pass the flat-rods round the frequent angles. Capt. W. Teague, jun., proposes to do away with this system, which involves enormous waste of power in the inevitable friction, and to substitute flat-rods, being as pendulums to take the weight, with hold-back or fend-off bobs at the angles. These bobs are merely simple arms, to the free end of which the two rods at the angle junction are connected, while the other is pivoted in the side of the shaft or level. By this means not only is the bulk of the friction avoided, but the rods are kept true in direction and relieved from undue strain. Of this arrangement Capt. Teague exhibited a model. He also showed a complete model of a skip road as in operation at Tincroft, in which guides are dispensed with; this road at Tincroft is down 120 fms. vertical, and 220 fms. on the underlie.

Capt. Davey, Wheal Kitty, sent an arrangement for wooden pumping-gear, the bucket and working barrel being alike of wood, and ingeniously contrived. This return to original materials is suggested for use where the mine water is highly corrosive and destructive to metallic pumping-gear.

Mr. H. R. Marsden, of Leeds, exhibited through Mr. Provis, his representative in the county, a model of his new form of stone-breaker, which gained a gold medal, silver medal, and an honourable mention at Paris. This admirable machine was described in full detail in the *Mining Journal* very recently, and here, therefore, it will be sufficient to say that the toggles and pitman have been modified with a view of diminishing friction, the result being that by the new arrangement a far larger quantity of material is treated with a much smaller consumption of power. It is really remarkable that these machines have not made their way in the county more rapidly. Wherever they are used they are prized, and there are very few mines that would not greatly benefit by their adoption.

Messrs. Harris and Rounsvelt exhibited a full sized model of their patent centre-feeding stamp head. This is an implement of enormous size, for its weight in metal with its connections will be 33 cwt., and the stamping face is equal to that of six ordinary stamp heads of 5½ cwt. each. The feed is from the centre, so that the ore must be stamped before it can pass out from under the head, those stones which are not fairly hit flying about in the centre opening only. Of course, if the stuff fed is of unequal size—a very uneconomical arrangement by the way—the largest piece gets well nigh the full force of the whole blow. One notable feature is the amount of grate area secured, the entire circumference being available for each purpose. The head can be adapted to gravitation stamps, as there is provision for absolute centre lift, but it is specially intended for quick-acting stamping machines, and the one of which the exhibit was the model is being manufactured for use in Cox's Compressor Stamps. So used it is claimed that such a head "would stamp twelve times the weight of ore per 24 hours that six gravitation stamps of 5½ cwt. each would stamp," the cost of fuel not exceeding 6d. per ton.

Cox's Compressor Stamp we may explain consists of a steam cylinder and two pneumatic cylinders. The steam cylinder is placed on the top of the larger pneumatic cylinder, which is used as a compressor, one piston-rod being common to both. The second pneumatic cylinder stands by the side of the first, and is connected with it both at top and bottom. In this cylinder is the piston to which the stamp head is connected. The machine acts by the admission of high pressure steam to the upper part of the steam cylinder. The movement of the piston downward compresses the air in the first pneumatic cylinder, thence driving it into the second and lifting the stamp head. When the piston in the first cylinder rises again it compresses the air above and drives it into the top of the second cylinder, and thus forces the stamp head down with greater velocity than that due to gravity alone. To prevent heating the pneumatic cylinders are placed in a tank of water. The machine can if desired be driven by water-power. The speed in any case is, of course, dependent on the power used. Fresh steam is admitted into the cylinder during the down stroke only when the stamp is being lifted. The force which is developed by expansion is quite sufficient to give the blow.

Though not included in the exhibition, visitors thereto were invited to see Willoughby's "Elephant" stamps in operation at Wheal Uny, where they are said to be doing very good work.

A capital lot of steel castings in full variety were shown by Messrs. Joseph Fenton and Sons, of Sheffield. Steel may cost more at the outset, but its lightness and superior lasting powers are giving it rapidly the advantage in every way over iron, as being far more handy and economical. Messrs. Fenton's wheels are in use in Cornwall in several mines, including Levant, West Basset, and Dolcoath. At the latter they are in use in the skip road, which goes to the 325 fm. level—the greatest depth worked by a skip-road in the county, if not in the kingdom. Messrs. Fenton's patent corfe which are very ingenious, and the steel wheel-barrow, which was among the exhibits, attracted considerable attention.

In addition to a horizontal engine excellently made, but not novel, and several minor matters, Mr. Holman, of Camborne, sent an ap-

paratus for facilitating the filling of black tin into sacks—a "sack packer." At present it takes a couple of men to sack tin—to hold the sack, shovel the tin in, and shake it down. This apparatus will enable a man and a boy not only to do the work more easily but more efficiently. The sack is suspended on a kind of balance principle at one end of a long overhead lever. As the stuff is shovelled in a boy, by pulling a rope attached to the other end of the lever, jerks the sack up and down, and knocks it violently against the ground. In this way it is said that 1½ cwt. more tin can be packed in a sack than in the ordinary way.

Messrs. Turner, of Rochdale, sent a valuable and practically interesting series of exhibits. The patent elastic metallic washers are made of india-rubber, strengthened on the inner edge with metal rings of suitable section; hence they are practically unburstable, and at the same time preserve their elasticity. The rings relieve the rubber of the pressure, and prevent it from squeezing into the pipes, and they may be safely applied under any pressure, and are not affected by vibration. The firm send also their improved composition for the removal and prevention of incrustation in steam boilers, and samples of their patent red-lead rope and other packing adapted to all kinds of purposes—good and cheap.

Messrs. Toope, Walworth, exhibited their patent elastic sectional non-conducting felt, and asbestos removable covering for steam surface, gas and water pipes, and are equally adapted to prevent escape of heat, or freezing. It is very light and handy, composed of hair felting and paper in layers, protected from charring by an inside layer of asbestos. It can be applied while the pipes are either hot or cold, and to pipes of the smallest diameter; it is made in sections 3 ft. long to fit the pipes. Being cut longitudinally on one side, it can be slipped on, and is then fastened with staples.

Another form of covering shown is the adaptation of cork, exhibited on behalf of the Society Anonyme of Liège, by Messrs. Goodbrand and Holland, Manchester. This consists simply of cork cut into sheets of from ¾ to 1 in. in thickness, and fitted on when hot to allow of the pipes being at their highest expansion. The sheets are first bound on with string, then after a few days when the cork be shrunk a little in length galvanised iron wire is substituted. This is all, and it will be seen that no special skill whatever is required in application, and the removal is as easy as fixing.

Amongst the largest exhibitors were Messrs. C. W. Julius Blanche and Co., of Manchester and Merseburg, who sent a great variety of beautifully made engine fittings and other matters, including pressure vacuum and steam gauges, hydraulic gauges, steam traps and valves, engine counters, injectors, steam whistles, grease cups, low-water alarms, and lubricators, the last on the "Hardinge" principle, self acting, and capable of universal adaptation. There are special forms for engine cylinders, either vertical or horizontal in action, for loose pulleys, bearings, and journals, and a pendulum lubricator for connecting rods, slides, eccentrics, oscillating engines, and the like. In the lubricator of the first-class for steam-cylinders the supply of the lubricant is governed by the alternate supply and exhaust of steam, or other elastic force used. In the pendulum lubricator the supply is governed by a cam and ratchet arrangement, actuated by a pendulum, which vibrates at each stroke. The form for bearing is so arranged that if the bearing becomes heated the flow of the lubricant is quickened, the heat being conveyed into the cup by a metal conducting tube. In the adaptation for loose pulleys a dabbing action is set up. Thus in all, but in varied ways, the supply of the lubricant is directly dependent upon and governed by the action of the machinery.

Messrs. Fussell and Co., Sheffield, forwarded a series of tools of various kinds and samples of blistered steel.

An extensive array of articles of American invention and manufacture, alike in tools and machinery, were shown by Messrs. Lelig, Sonenthal, and Co., London.

The British and Foreign Metaline Company, Dundee, showed samples of their "metaline"—a plumbago like substance, which is inserted in the form of little plugs in holes drilled for the purpose in bearings of various kinds, and which entirely does away with the necessity for the use of oil or other lubricants. As the machine works so the metaline comes into play, spreading over the surface of the bearing, and coating it as well as the moving surface with a fine polish of metaline particles, filling up all the pores or interstices. Metalined boshes have been found to show no trace of wear after many years of hard work.

The Warrington Wire-Rope Company sent a series of examples of their well-known manufactures; and Messrs. Lumley and Co., of London, samples of tinned wire of fine gauge.

From the Kennel Vale Gunpowder Company came a case containing a very interesting series of exhibits illustrating the manufacture of gunpowder, showing the materials used, their appearance in the different stages, and the various forms of the products. Their great specialty is their patent blasting cartridges in compressed gunpowder (Davey and Harrison's), which have a tapered hole through the centre, and can thus be strung on the safety fuse, the lower end of the fuze being doubled in, and thus jammed, and so lowered into the hole. A wad of moss, hay, or paper is then placed over the charge, and the hole tamped in the ordinary manner. The cartridges can, however, if desired, be fired in any way employed for ordinary blasting-powder. As the cartridges are issued ready for use they comply strictly with the provisions of the Explosives Act. Weight for weight they do far more work than ordinary blasting-powder, make less smoke, produce less gas, do not waste, and have withal an exceptional heating power.

Very good samples of fire-brick and similar wares were sent by the St. Day Company and the Pennance Company, Lanner. The most interesting series of exhibits in this department was, however, to be found at the stand of Mr. E. Borlase, who for some years now has devoted his attention to the utilisation of the hitherto waste clays, of which Cornwall possesses a practically inexhaustible supply, some of them being of the finest quality. He showed a quantity of articles made from clay obtained from seven different localities, all adapted for utilisation, and some capable of producing ware not only of rough utility, but of high finish and beauty of texture. Some of the clays were from the bottoms of mines, others derived even from the waste of mining operations, but these were chiefly introduced to show what unpromising materials could be utilised, and the principal clays dealt with were of course natural deposits. Mr. Borlase is developing the germ of what should be a great industry if a little capital is judiciously applied.

Camborne is the centre of the mining instrument manufacture of Cornwall, and a good show in this department was, therefore, only to be anticipated. Messrs. Letcher Brothers exhibited their blow-pipe apparatus, prize and improved, and Mr. Jeffery and Mr. Newton instruments in variety. Mr. Newton exhibited a new form of engine counter, which seems likely to supply a want. The ordinary engine counter records the number of strokes, but takes no heed of their length, and if that length falls short from any cause the record of the counter would be in excess of the work actually done. The new counter, however, takes cognizance of the length of the stroke, and thus gives an exact account of the performance of the engine. Mr. Heath, of Plymouth, lent a very choice collection of microscopes.

"Steelheat" tools have become a promising ware. They were exhibited chiefly in the form of picks by Messrs. W. Morgan and Co., of Bristol. The peculiarity of the invention here is that a core or heart of steel is introduced into the iron, of which otherwise the tools are manufactured, this steel supplying the edge. An implement so made can be made much cheaper, and for ordinary purposes with a much more useful form, than if it were wholly of steel, while as it wears all the advantages of edge, &c., that complete steel construction could give are secured. The most ordinary blacksmith can without difficulty sharpen a pick of this kind in the most effective manner. Messrs. Morgan also sent a good sample of hickory hilt.

Mr. House, of Bedford, sent his water detector and alarm. This consists of a vessel fitted with a whistle worked by a ball-tap, while the water is at the proper height the whistle is inactive; when the water falls the ball-tap opens a steam passage to the whistle. The arrangement is very simple, and by no means liable to get out of order, while it cannot in any way be interfered with.

A lot of samples of the results of the decorative art as applied to

tin-plate came from the Neath Tin-Plate Company. They are ingenious and tasteful, and embodied an idea which might be extended with considerable advantage.

Mr. Pentecost, of Camborne, exhibited his wood and other plugs for pumping, first shown at the Polytechnic.

Mr. Husbands, of Hayle, sent his ingenious paradox safety valve worked by mercury on the principle of the hydrostatic paradox.

The miscellaneous included cases of minerals by Capt. C. Thomas and Mr. Newland, an ambulance for the order of St. John of Jerusalem, Messrs. Pocock's tubular water and air-bed, and the patent filter of the London and General Water Purifying Company.

On Wednesday there was a luncheon, over which Mr. Basset, of Tehidy, presided, and at which Mr. Pendarves Vivian M.P., was present, and spoke on the necessity of adopting all improvements in machinery and processes in order to keep Cornish mining abreast of the times. The Mining Institute was doing excellent work in aiding in this matter by the papers and discussions, and by such an excellent and thoroughly practical exhibition as they had there that day. Mr. Vivian spoke of the smelters and the miners as having a common interest; but this was questioned by Captain Teague, who considered that the smelters acted in opposition to the interests of the mines, and held that nothing had kept mining afloat but the hard-headedness and dogged perseverance of the mining community. He believed that the worst was now over, and that good times were not very far distant.

After the luncheon Dr. Foster, the President, delivered his address, in the course of which he passed in review the chief characteristics of the exhibition, and directed attention to those exhibits which he considered calculated to be of most special utility to the mining community.

In the evening there was a concert, and on Thursday, in addition to the drill trials, a conversazione, at which interesting experiments were made with the telephone, microphone, and phonograph, the latter exhibited for the first time in this country.

The following awards have been made:—Certificates of Merit: Major Duncan, for his wheeled ambulance litter; Capt. W. Teague, jun., for his skip-road and model of flat-rods; Mr. T. B. Provis, for model of Marsden's improved stone breaker; Mr. H. T. House, for his patent low-water detector and alarm; Turner Brothers, for elastic washers, white core packing, self-lubricating packing, square flaxcore and graphite packings, and for patent coverings; the British and Foreign Metaline Company, for metaline plugs; Mr. T. B. Provis, for model of Marsden's ore-crusher; Messrs. Fenton and Sons, for their steel wheels, hammers, pinions, &c.; the London Water Purifying Company, for filters; to Messrs. Julius Blanche and Co., Manchester, for exhibits of fittings, &c.; Messrs. Selig, Sennenthal, and Co., London, for collection of iron and other goods; Mr. W. Heath, for microscopes and telescopes; Tinplate Decorating Company, Neath, for ornamental tin goods; Messrs. Letcher Brothers and Jeffery, for blow-pipe apparatus; Mr. A. Jeffery, for mathematical instruments; Mr. Edward Borlase, Redruth, for specimens of Cornish clays; and the Kennel Vale Gunpowder Company, for case of raw materials used in the manufacture of gunpowder. "Highly Commended": Messrs. Pocock Brothers, for patent invalid bed; Mr. Richard Pentecost, Camborne, for patent blasting plugs and wooden patterns of Harris and Rounsvelt's centre feeding head.

SOUTH STAFFORDSHIRE INSTITUTE OF MINING ENGINEERS.

The monthly meeting of the South Staffordshire and East Worcestershire Institute of Mining Engineers was held in the Geological Museum, Dudley, on Monday, Mr. William North (Mayor) presiding. There were also present, among many others, Mr. Henry Johnson (vice-president), Messrs. T. Latham, J. Cole, W. J. Hayward, J. M. Fellows, John Field, W. Farnworth, D. Rogers, J. Hughes, R. Latham, Broughall. It was shown by the reading of the minutes of the Council that the members of the North Staffordshire Institute were to visit Sandwell Park Colliery, Lord Dudley's Clay Croft Works, and the Lye Cross pits on Wednesday next. They are to be met by the Council of the Staffordshire Institute. A discussion as to the advisability of continuing the chemistry class in connection with the Institute was opened, but the general opinion was that a sufficient number of pupils would not present themselves, and the advisability of the opening or not was left a moot question. The next business was the reading of a paper compiled by Mr. Alex. Smith (M.I.C.E.), the secretary. The subject was "The increased danger of gas when floating coal dust is present." In opening Mr. Smith read a letter from Mr. J. Richard Haines, secretary to the North Staffordshire Institute, in which the latter says "There can be no doubt but that it (the dust) has been a fearful auxiliary to the frightful explosions in this district, nearly the whole of the explosions in this district having taken place in the 8-ft. Banbury coal seam, and the dust is most abundant in this seam." Some of the dust was here exhibited. It presented all the appearance of lampblack. Mr. Smith then read from a paper contributed by Mr. Lucas to the North Staffordshire Institute, in which the author held that the fine dust floating about was capable of almost spontaneous combustion. Mr. MacDonald, a member of the North Staffordshire Institute, agreed with the reader, and gave personal experience on the matter. Mr. Smith's paper then dealt with a lecture on "Colliery explosions," by Mr. Thomas Carnelly (Owen's College, Manchester).

In the discussion which followed, Mr. Johnson said all the gentlemen quoted were high authorities on the subject, and it behoved all with dusty mines to look quickly into the matter. When they were assured that 1 per cent. of carburetted hydrogen mixed with coal dust would cause an explosion too much care could not be exercised. He had no doubt in his own mind that the explosion at Apedale was due to this cause. He moved a vote of thanks to the reader, and proposed that Mr. Williams, the teacher of chemistry, should have some of the dust to experiment upon. This was carried unanimously.—Mr. Job Tomson instanced a case where floating dust exploded, doing some little damage.—Mr. Farnworth said that he would have been great damage if 1 per cent. of carburetted hydrogen had been present.—In reply to Mr. Johnson, Mr. Roper said he had no doubt the explosion at his place was due to the dust.—The discussion was then adjourned.

SOUTH LANCASHIRE AND CHESHIRE COALOWNERS' ASSOCIATION.

The annual meeting of members was held on Tuesday, at the Queen's Hotel, Manchester, Mr. R. Fletcher, jun., the President, occupying the chair. The report of the President upon the proceedings of the Association during the past year was read. Amongst the matters which had occupied the attention of the Association was the Thirlmere water scheme of the Manchester Corporation, with regard to which it had been resolved to present a petition in opposition, as the Manchester Corporation were not prepared to agree to the insertion of a clause similar to section 24 of the Act of 1863, for the protection of the mineowners, but ultimately, as a similar clause was agreed to, the opposition was withdrawn. Mr. J. H. Johnson, of the Abran Coal Company, was unanimously elected president for the ensuing year.

FURTHER EXPERIMENTS WITH COAL DUST.—At the North of England Institute of Mining and Mechanical Engineers meeting, on Saturday, Mr. Friess Martreco gave an account, illustrated by tables and diagrams prepared by Mr. D. P. Morison, of some further experiments recently conducted by various members of the Institute, including Mr. William Cochrane, Mr. Morison, Mr. George May, and others, on coal dust in relation to colliery explosions. These experiments have been carried out in the laboratories of the college, and at Elswick, Harton, and other collieries, in order to determine how far a mixture of coal dust and air, in the absence of fire-damp, is capable of producing an explosive action. The main conclusion to be deduced from the experiments, so far as they have gone, are that the gases from a "blown-out" shot are capable of raising and firing a cloud of such a mixture, in which the flame produced by them may be prolonged to a considerable distance, and that when produced under other conditions described such a mixture might fire at a flame. In either case there is produced a violent action, which, even if it be not strictly what can be called an explosion when carried out on a small experimental scale, may easily become such

when considerably magnified in practice. On the motion of Mr. A. Stevenson, a vote of thanks to Prof. Marocco and Mr. Morison for the lecture, which frequently elicited applause, was carried by acclamation.

RICHMOND CONSOLIDATED MINING COMPANY.

MR. PROBERT'S REPLY TO THE REPORT OF THE COMMITTEE OF INVESTIGATION.

A complete and exhaustive reply of Mr. Probert to the report of the late committee of investigation has just been issued to the shareholders in anticipation of the general meeting to be held on Wednesday, and it cannot be doubted that by the adoption of this course the proceedings at the meeting will be much simplified, as every shareholder has now the opportunity of judging between the statement of the late committee and Mr. Probert, so that the discussion, so far as this portion of the subject is concerned, ought to be confined to the question of the verification or otherwise of the statements made. It is scarcely necessary to remind the shareholders that the report of the late committee reflected most seriously on Mr. Probert's management of affairs at Eureka, although, as was stated in the *Mining Journal*, at the time the committee's report was issued the evidence afforded by the report itself was sufficient to deprive the reader of confidence in its accuracy and practical value, although he might have no independent data to assist him in clearing up the points at issue. That this view was justified is beyond question now that Mr. Probert's reply is known, and he no doubt acts wisely in determining "purposely to refrain as much as possible from argument, and to add only such comments and remarks as seem necessary for explanation, leaving the shareholders to form their own conclusions as to the trustworthiness of the entire report issued by the committee" from the evidence which Mr. Probert offers.

To give anything like a satisfactory epitome of a quarto volume of 132 pages, already condensed to the utmost, is of course impracticable, yet a few of the more important points may be referred to, and it may be stated generally that the late committee have, perhaps from mere want of knowledge, extracted from and formed conclusion upon extracts from documents, which extracts no more supply an idea of the documents themselves than would the repetition of a negative sentence with the negative omitted represent the original. Mr. Probert states that he "simply deals now with a few of the salient points of the report by way of instalment, but he is quite prepared to answer every allegation in detail, and to prove that the conclusions arrived at by the Committee of Investigation are as incorrect as the premises on which they are founded." First, the committee charge Mr. Probert with not having permitted any systematic explorations in the quartzite, and of having carried out his own views "in direct opposition to the opinions of the able experts called in to report;" and further that there was a constant conflict of opinion between Mr. Rickard and Mr. Probert on the subject of the exploration of the mine. This larger extracts from the letters containing the statements, used without context by the committee, show not to have been the case. Mr. Probert appears always to have exercised directive influence, but never to have acted dictatorially. The correspondence between Messrs. Probert and Rickard, when the former was away from the mine, appears to have been without exception friendly and unusually long.

As an example it may be mentioned that when the 700 ft. drift had just touched the vein Mr. Probert wrote (Oct. 14, 1875), "I have no belief in the probability of our ever having a large body in the quartzite, and for several reasons. First, the quartzite has never yet (in the district) produced any quantity of ore, and the Hoocac itself is no exception to this rule. Secondly, the ore formerly found in the quartzite in the hill above your house (Coy Hill) was mostly free of chloride, indicating a formation uncongenial to such ores as those of the Richmond and Ruby Hill. Thirdly, quartzite resists the action of water laden with carbonic acid, the agent which corrodes limestone so rapidly, and produces large caverns and pipes; if, therefore, no caverns can be formed by carbonated waters it is vain to expect to find large ore bodies in the quartzite." To this Mr. Rickard replied (Oct. 18), "I am quite of your opinion that it is not probable we shall ever find large bodies of ore in the quartzite, although the main ore pipe or vein may get near, or even touch, the quartzite in places. The bottom of the mine will be very interesting when we have opened it a little more."

The committee gave an extract from one of Mr. Rickard's letters dated Nov. 10, 1875, making it appear that Mr. Rickard was advocating a different mode of prospecting to that which Mr. Probert suggested. The larger extract shows that so far from this Mr. Rickard stated that "your ideas about the ore bodies quite agree with mine," and was evidently adopting Mr. Probert's views. This set of extracts (September, October, and November, 1875) shows beyond doubt that Mr. Probert's opinions were very fully expressed both as regards prospecting towards the quartzite and as to the importance of pushing explorations in the westerly ground. They also show that Mr. Rickard's ideas and his own were in perfect harmony respecting the formation of the Ruby Hill, and the probable position of the ore bodies to be found in it. The confirmatory letters of Mr. Rickard's written in 1878 to the effect that Mr. Probert "has always been in the habit of conferring with him and the mining foreman for the time being on the subject of the exploratory and other works of the mine, and no special views or theories of his have, so far as Mr. Rickard is aware, been forced on him or anyone else" are unnecessary, and, moreover, being written after the questions have been raised, are worthless as evidence. Mr. Probert emphatically denies having ever told the committee (Com. Rep., p. 8, par. 9) that the prospecting towards the quartzite and the compromise line was discontinued "because he did not think that profitable ore bodies would be found outside the limestone." Such a statement would have been untrue, and inconsistent with the reason correctly stated by the committee quoting (p. 66, par. 2) from Mr. Probert's letter—"The sole reason was that we did not want to precipitate a quarrel or invite our neighbours to prospect the Margaret ground"—as to the prospecting towards the compromise line, and inconsistent with the reasons given on page 8 as to the quartzite direction.

As to the smelting works, the committee condemned the hydro-cyclone furnaces, charged Mr. Probert with purchasing rights on his own account instead of for the company, stated that the fume flue was badly constructed, and that the furnaces were not economic in working. These statements can only, without assuming that the committee were actuated by impure motive, be attributed to regrettable ignorance of the subject on which they wrote, and almost culpable carelessness in collecting facts. In December, 1876, the three stone furnaces consumed on the average 36,744 bushels of coal per ton of ore, and the hydro-cyclones 37,594 bushels. In January, 1877, the figures were with the stone furnaces 41,03 bushels; hydro-cyclones, 39,85 bushels. In February, 1877, stone furnaces, 40,35 bushels; hydro-cyclones, 38,95 bushels; and in March, 1877, stone furnaces, 38,1 bushels; hydro-cyclones, 42,5 bushels. Mr. Probert points out that in order to make an unfavourable comparison between the hydro-cyclones and the stone furnaces the committee have introduced a statement at the end of Mr. Eilers' report, to which he must call special attention for its unfairness. In the first place, the month of March—a broken month at the end of the season—is taken for comparison when No. 4 hydro-cyclone only ran 18 days, and No. 5 only 10 days, while the three stone furnaces ran 25, 26, and 31 days respectively. Nor was this all; instead of comparing the coal consumed in March, which was 38,1 bushels per ton of ore, with that consumed by the hydro-cyclones in the same month (42,5 bushels), the coal average for the stone furnaces for March is obtained from the average for the following month of April, when it happened to be only 35 bushels per ton; as a further injustice, the quantity of material smelted in the two hydro-cyclones in March (together working only 28 days) is understated to the extent of 116 tons, this amount of drosses having been smelted in these furnaces, in addition to the 392 tons of ore and flue dust.

Probably the best comparison is to take neither the committee nor Mr. Probert's figures, but to take the average of the stones and hydro-cyclones respectively for the three months ending February, and it is by this means found that on a three months' run the stone furnaces consumed 39,375 bushels per ton of ore, whilst the hydro-

cycles consumed 38,798 bushels per ton of ore, the difference being rather more than half a bushel per ton of ore in favour of the hydro-cyclones. It should have been stated too that whilst the committee stated that there had been "about 5000% completely thrown away on them" (the hydro-cyclones) the total cost of the three furnaces complete together, with the furnaces, was as nearly as possible half that amount. The stone furnaces required five men per shift of eight hours, or 15 per day; the hydro-cyclones require three men per shift, or nine men per day. The labour cost per ton of ore smelted is about the same in both kinds of furnace, but "the cost for repairs is far less in the hydro-cyclones." In regular working the stone furnaces have consumed on the average 32,72 bushels, and the hydro-cyclones 29,20 bushels per ton of ore smelted—that is, the stone furnaces consume 12 per cent. more fuel than the hydro-cyclones.

Mr. Eilers' report is so inaccurate as to the details of the construction of the hydro-cyclones that his remarks upon them are worthless; it is, therefore, unnecessary to fully give Mr. Probert's refutation of them. The committee's statement that "the present success of the stone furnaces is very much due to the more liberal use of quartz ore as a flux" is shown to be erroneous, by a table of the ores and fluxes used each month from January, 1876, to February, 1878, which shows that after the final enlargement of the furnaces there was no appreciable difference.

It is shown that the assayer—Mr. L. H. Davis (who states that he informed Mr. Pulbrook of the facts)—did not leave Eureka because he could not obtain appliances and office room, but because D. Stringer, at that time smelting manager, desired to retain the assayer'ship for his son. The assaying apparatus had been mysteriously destroyed before Mr. Davis's arrival. When Mr. Davis returned to San Francisco he was quickly re-engaged by Mr. Probert, and has remained in the company's service, giving great satisfaction ever since. The value of fume-flues is too well known in this country to necessitate following the reference to the committee's peculiar notions concerning them. It was Mr. Probert who first introduced the flue in the United States, and he is given full credit in the Government report for having done so; and Mr. Probert says, "No sooner was the flue put up at the Richmond Works than it was adopted immediately (without acknowledgment) by our neighbours of the Eureka Consolidated Company, as well as by the Philadelphia Lead Company of Pittsburgh, and at a later period by Mr. Eilers himself at the Germania Works, Salt Lake—a sufficient endorsement of its value in the eyes of the managers of these establishments." Assuming the guess of the committee to be correct, that 20% worth of fume is still lost daily, the flue has saved 60 per cent. of the former waste, since it catches 30% per day, or has returned the company 48,000% since its erection, the total outlay upon it having been 2400%.

As to the general management, Mr. Probert remarks that the committee have all through their report betrayed such an utter want of judicial mind, calm temper, and freedom from prejudice which should characterise persons entrusted with such functions as theirs that it is not surprising to find them now assuming more and more the character of "counsel for the prosecution," and even indulging in invective and personal abuse. Not only are their earlier insinuations and allegations reiterated in referring to the general management in varied form, but new accusations are introduced which hardly appeared in the original indictment, and which but for the rancour displayed in making them would be amusing from their extravagance. He passes over their personalities, little concerned at their attempts to make him out on the one hand an imbecile, and on the other a charlatan; nor will he treat the general accusations which they have levelled at him with any greater respect than to give them a general denial, which he now does. He notices only such of these new accusations as are sufficiently definite and precise in their nature to justify the trouble of refutation. He states that Mr. Elliot, the late chairman, correctly represented at the meeting in 1872 the position in which he (Mr. Probert) stood when he went out to the mine—"he went out as a simple shareholder, and in no sense as the agent of the company, but of course expected his expenses to be paid."

There are letters from Mr. Rickard stating that Mr. Probert never tempted him or offered him inducements to buy shares, Mr. Rickard having become a shareholder at his own will. As to the refinery, documentary evidence is given in support of what has already been stated, that Mr. Probert tried to secure for the Richmond Company the exclusive rights for Nevada, but that Messrs. Luce, Fils, and Rozan positively refused to sell a single State right to anyone, but offered the right for the entire United States to the Richmond Company. As the company could not accept this Mr. Probert accepted in order that the company might have the advantage of using the process. The committee feared that "the day is very far distant when the Richmond refinery will be in a position to command either the China or the Eastern lead markets," but as a matter of fact 1720 tons of Richmond lead has been shipped to China and Japan alone between Nov. 17, 1877, and Sept. 15, 1878. The depreciation in the value of lead in the last twelve months has diminished the profits to the extent of at least 70,000%, or one-fourth the entire capital of the company, which has of course affected the working results of the refinery. Finally, Mr. Probert leaves it to the shareholders to judge for themselves whether the late Committee of Investigation have really produced "a report of ascertained facts leading to practical conclusions," or whether it is not rather "one of personal opinion and hearsay evidence."

CIRCULAR OF MESSRS. STEUART, MAYBURY, AND PULBROOK, DIRECTORS AND MEMBERS OF THE COMMITTEE OF INVESTIGATION.

In forwarding a copy of this circular Col. F. G. Steuart writes:—"As you will, doubtless, be publishing the notice of the meeting of the Richmond Mining Company for the 13th inst., and as that notice is a reflection on myself and two of my colleagues on the board, I shall feel obliged by your giving publicity to the enclosed circular lately issued by us to the shareholders in your next issue."

The circular contains so little of general interest to the shareholders that it is unnecessary to devote space to its publication, but the subjoined abstract will supply what is believed to be a fair outline. Messrs. F. G. Steuart, A. K. Maybury, A. Pulbrook, George Hopkins, John Bayliss, and Samuel Bayliss were appointed the Committee of Investigation at the extraordinary general meeting on Aug. 23, 1877. The committee's report was issued to the shareholders on May 29, 1878. At the meeting on June 18 proxies were lodged in favour of the committee (the signatories of the circular do not say in favour of the report, by 203 shareholders, representing 24,140 shares, and by 95 shareholders, representing 11,027 shares in favour of the directors; but the Hon. Randolph Stewart and Mr. L. T. McEwen, considering it unfair to act on the committee's report without receiving Mr. Probert's reply, it was ultimately resolved to refer the report and recommendations to the board for their consideration and guidance, the board to report to a meeting not later than Nov. 9 as to their action thereon, and that Mr. Probert having stated that he was preparing a reply and asked for a hearing, such reply should be printed and circulated among the shareholders, and Mr. Probert's presence at the meeting demanded.

Mr. Probert arrived in England on Sept. 30, and at the board meeting on Oct. 29 he stated that, although his reply was ready as far as he was concerned, he could not answer for the printers. Thereupon Mr. A. Pulbrook moved, and Colonel Steuart seconded, the following resolution:—"Mr. Edward Probert having stated to the board that he had been engaged night and day upon his reply to the committee's report, but that he could not undertake to circulate that reply, which would be incomplete, amongst the shareholders longer than two or three days before the time fixed to hold the meeting—Nov. 9—the board being of opinion that the spirit of the resolution has been carried out in that it is undesirable that a meeting should be held so soon after the circulation of Mr. Probert's reply, inasmuch as there will not be sufficient time for the shareholders to consider that reply, and the committee's report in order to give an expression of opinion at the meeting on the points it is convened to discuss; and that the meeting should not be convened until after Mr. Probert's reply had been circulated amongst the shareholders." To which Mr. Schultz moved, and Mr. Probert seconded, the following amendment:—"That the extraordinary general meeting for receiving and taking into consideration Mr. Probert's reply be convened for Wednesday, Nov. 13, instead of Saturday, Nov. 9, as per resolution of general meeting, July 2, 1878." Mr. Broughton and Messrs. Probert and Schultz voted in favour of the amendment, and Colonel Steuart, Dr. Maybury, and Mr. A. Pulbrook against it, whereupon Mr. Broughton, as Chairman, gave a second or casting vote in its favour; hence it will be seen that the shareholders have been called together to pass an opinion on a reply which nobody is likely to see until a few days before the meeting is held.

At the same meeting Messrs. Steuart, Maybury, and Pulbrook supported a resolution to send Committee's reports to all new shareholders, but the motion was lost on the casting vote of the Chairman. These gentlemen further state that they desire distinctly and at once to inform the shareholders that should they find the required majority of the shareholders desire their retirement, and are resolved to uphold Mr. Probert after the opinion expressed in their report of his general unfitness for the position he occupies, they will most willingly and cheerfully withdraw from the board, and thus save the shareholders

the trouble of attending a second meeting on this subject. It is likewise stated that Messrs. John Taylor and Sons have been employed (but it is not said by whom) to give an independent report. Their agent, Capt. Tonkin, late manager of the Cape Copper Mining Company, will shortly be returning from an inspection of the company's property, and it would no doubt be instructive to the shareholders to hear what those gentlemen have to say before coming to any determination as to the future management of the works at Nevada.

Taking the several portions of the Circular in order, the only conclusions that can be arrived at appear to be these. It is evident that the board as at present constituted is divided against itself, and "a house divided against itself shall surely fall." The number of proxies lodged in favour of the committee for the June meeting cannot be accepted as evidence in favour of the committee, since the shareholders could have had but 20 days (from May 29 to June 18) to consider a report more than twice the length of Mr. Probert's reply, for which they are allowed 14 days. But this is not all. At the time the committee's report was issued the subject was entirely new to the shareholders, so that the reader had to study and master every detail, for which task 20 days was certainly insufficient. But at the time of Mr. Probert's reply, all the details being known (from the committee's point of view), two days would be ample to master the reply and obtain such knowledge as would permit of a useful judgment on the relative merits of the two documents being formed.

The notion entertained by the Hon. Randolph Stewart, Mr. L. T. McEwen, and their supporters, that a man previously considered honourable condemned in an *ex parte* statement as incompetent, stupid, and dishonest ought to be allowed to answer before accepting the statement as true, is so generally regarded as warrantable that it would have been thought that neither military men, doctors, nor even lawyers, would have pronounced it unjustifiable. The Richmond Company has hitherto been fairly remunerative to the shareholders, and it will be the shareholders' own fault if by overturning all the existing system of management they render it unprofitable.

As to the promised report of Capt. Tonkin it is really scarcely worth the smallest consideration. Messrs. John Taylor and Son are undoubtedly honourable, but they have been singularly unfortunate in America, and in the case of the Mineral Hill, even one of the firm—Mr. John Taylor's own son—was so greatly mistaken that large loss ensued. To send an African copper miner to look at a Nevada silver mine can scarcely be expected to give more favourable results, and to accept the opinion of such an expert in opposition to that of even the company's officers, who have been for years at the mine, and acquainted with it, is simply ridiculous. Commendation and condemnation from such a source would be equally unworthy of consideration, even were any outside opinion required concerning a mine which is daily improving, and which during 1878, notwithstanding the serious depression in one of the metals largely produced by the company, has given the shareholders 21.15% per share in dividends, or 55 per cent. upon the entire nominal capital (more than twice that percentage on the working capital) of the concern.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS, MINEOWNERS, STOCK AND SHARE DEALERS, &c. 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Ten years ago the weekly information which had previously been published for a great number of years in *WATSON BROTHERS' Mining Circular* was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the *Journal* on the Clementina Mine.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when a report, conducted in the *Compendium of British Mining*, commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the *Compendium*, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and shareholding than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make the *Circular* now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

NORTH HENDRE LEAD.—The revenue account for the year ending Sept. 30 was given in the City Article last week, but there is one item in the general balance-sheet which reminds us of a story we heard a short time ago. At a meeting of shareholders in a certain mine the Chairman was remarking upon the great want of a new shaft, "when a shareholder very innocently asked if one could not be bought or borrowed?" He must evidently have had his eye upon North Hendre accounts, for here we find "new shafts and levels, 3902L 12s. 10L," taken as an asset—that is, as things that can be realised! We never, that we are aware of, saw these things in a balance-sheet before. The money expended in sinking shafts and driving levels is invariably charged in current costs; they are the most essential things in working a mine, but in no way can be called property, or an asset. Neither the expenditure incurred, nor any part of it, could be recovered, or would, in fact, form any property whatever in relinquishing the mine or in case of a wind-up. It is just possible, on the other hand, that expenses might have to be incurred in covering and securing the shaft.

The Joint-Stock Act (25 and 26 Victoria, cap. 89) in the first schedule given as a guide for balance-sheets divides "property," such as can be taken as an asset into "immovable and movable." The former consists of—1. Freehold land.—2. Buildings.—3. Leases. Movable property consists of—1. Stock in trade.—2. Plant, or things movable that can be converted into money. In the North Hendre accounts, machinery and plant are among the assets for 3430L 11s. 8d., which is right enough; then comes new shaft and levels, 3902L 12s. Take this sum from the assets, where we question its right to be, and there would be an end of the "3306L 9s. 1d. available for a dividend!" There may, however, be an explanation given as to these items, something that we know not of.

COPPER is in almost universal use, both in the arts and manufactures of the country, and also as an alloy in almost every description of metal. The French standard for gold is 900 parts gold and 100 copper; the English standard, 916-17 gold, silver and copper 83-13. The English standard for silver contains 925 silver and 75 copper. In tinning iron there is used 8 parts of tin to 1 of iron. The country just now is flooded with so-called French "pennies," but which are not equal in value to ours; and we understand a very profitable trade is being carried on by buying them up in France and circulating them here. A stop should be put to this—and every one should refuse to take them. If copper money is wanted it would be a great boon to the trade if some hundreds of tons of that metal were cleared off the market and coined into pence.

PRINCE OF WALES returned large quantities of copper ore and paid good dividends from comparatively shallow levels; and the works were stopped, because the engine was inadequate to keep the water from the bottom level, and the shareholders were averse to the call necessary to provide funds for a new one, as it was required, just after spending a large sum of money, which absorbed the balance in hand, for steam stamps for tin, which were insisted upon against our advice, and that of the agents. The silver department now being worked on tribute is not so certain or lasting as the copper, though sudden discoveries sometimes create excitement. To work the mine as it ought to be worked a large engine—to be got cheap enough now-a-days—should be erected, and the only way to save the property, if it could be carried out, would be to form a limited company in (say) 12,000 shares of 11 each, give the present company 5000 fully paid-up shares in the new (provided they each assist by taking up a few of the others), and 10000 in

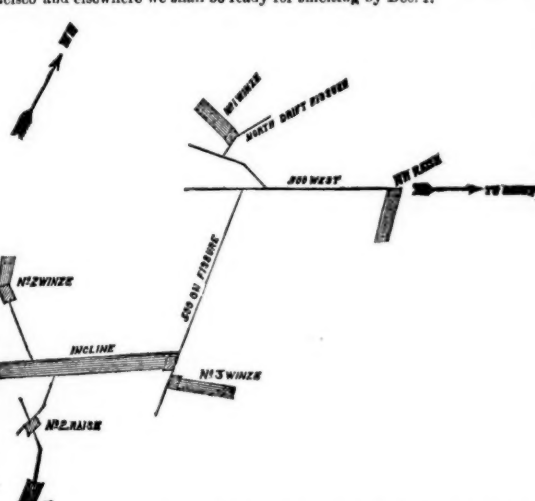
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WEST GODOLPHIN MINE.—His Grace the Duke of Leeds, through his agent, Mr. P. G. Hill, of Helston, has been pleased to grant a total remission of royalty on all minerals that may be produced by the West Godolphin Company during the ensuing six months, and at the expiration of that time, and during his pleasure, to accept

In the Brown Mine the block of ground west of the Bishop winze, which I have lately drifted on and opened up, is 16 fms. long by 8 fms. wide; we are now stopping on this block, and have $2\frac{1}{2}$ in. of mineral, worth 1400 ozs. of silver per ton. On Blind lode, intersected 600 ft. inside the Silver Ore tunnel, I have pu

THE WELSH SLATE QUARRIES.—At the Penrhyn, Llanberis, and other large quarries in North Wales, the "bargains," or contracts taken by the workman, were yesterday let at a reduction averaging from 20 to 25 per cent. The reduction was necessary owing to the accumulation of stocks and the dulness of the trade, which, it is said, is in some degree traceable to the importation of American slates, and the North Wales Quarrymen's Union advised its adoption by the men, who were in favour of shortening the hours of labour. At the Rhos quarry, Bettws-y-Coed, the strike has now extended over 15 weeks.



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LOCOMOTIVE TANK ENGINES

FOR MAIN LINE TRAFFIC, SHORT LINES COLLIERIES, CONTRACTORS, IRONWORKS, MANUFACTORIES, &c., from superior specification, equal to their first-class Railway Engines, and adapted to harpcurves and heavy gradients, may always be had at a short notice from—

MESSRS. BLACK, HAWTHORN, AND CO.,

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THE BIRMINGHAM WAGON COMPANY

(LIMITED)

MANUFACTURE RAILWAY CARRIAGES AND WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order main tained by contract. MANUFACTURERS also of IRONWORK, WHEELS, and AXLES.

WAGON WORKS, SMETHWICK, BIRMINGHAM.

THE LAMORNA HARBOUR AND GRANITE WORKS

(LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

By which the entire liability of each shareholder is strictly limited to the amount of each share.

Capital, £25,000, in 2500 shares of £10 each,

to be paid as follows:—

£2 10s. on application, £2 10s. on allotment, and the remainder in two equal parts, at three and six months from date of allotment.

If no allotment be made, deposits will be returned in full.

Of the above shares 1500 are offered for public subscription.

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WILLIAM HENRY OWEN, Esq., 1, St. Leonard's-place, Mount

Radford, Exeter.

HORATIO RICHARD SNELGROVE, Esq., Architect and C.E.,

Craven-street, Charing Cross, London.

The Reverend JOHN BARTLETT, M.A., the Rectory, Gerrans,

Grampound, Cornwall.

EDWIN BRADSHAW, Esq., Contractor, St. Thomas, Exeter.

GEORGE WREFFORD, Esq., Oakville, Anerley, London, S.E.

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The UNION BANK OF LONDON, Chancery-lane, London.

LOCAL BANKERS.

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MANAGING DIRECTOR.

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SOLICITORS.

Messrs. CROWDER, ANSTIE, and VIZARD, 55, Lincoln's

Inn-fields, London.

AUDITORS.

F. W. PIXLEY, Esq., 5, Westminster Chambers, Victoria-street, S.W.

SECRETARY.

Mr. EDWIN FEWINGS.

OFFICES.

DEVEREUX BUILDINGS, 214, STRAND, LONDON, W.C.

This company has been formed to purchase, from W. H. Owen, Esq., the lease

and freehold lands of the Lamorna Harbour and Granite Works; and the directors

have pleasure in presenting to the public a property of a non-speculative character,

in working order, and ready to make immediate profits.

The Lamorna Harbour property, situate at Lamorna Cove, on the south coast

of Cornwall, about 2½ to 4 miles from Penzance, comprises about 20 acres of lease-

hold land, and also as much of the foreshore as is sufficient for the pier (which

forms the breakwater) and harbour. The harbour is formed by a wharf, 191 ft.

in length, and a cross jetty or pier 129 ft. in length. On this land the granite

quarry has been opened and worked, and is now clear and in working order. The

quarry has a crane of sufficient power for all quarry purposes, and on the harbour

stands another powerful crane for shipping purposes. There is on the upper

platform a travelling crane for loading and unloading and stacking stone

on and from the tugs, wagons, or trucks. There are also several substantial stone-

built buildings, consisting of a large blacksmith's shop, fitted with two forges in

working order, a smaller one used as a store, also a powder magazine, and other

buildings. The wharves and pier are well and substantially built, in ground blue

lias mortar, solid throughout, and every stone of the pier within range of the sea

was laid in hot hydraulic mortar and cemented with Roman or Medina cement, so

as to form one solid mass, from surface to centre, equal to any original solid rock.

There is also a stone built carpenter's shop, and line and mill house, containing

a revolving mill for grinding lime, driven by an overshot water wheel, equal to

about 12-horse power, which may be increased, and is applicable to any purpose,

such as machinery for polishing granite, or for a saw mill or bone-mill, or any other

purpose for which milling power may be required. Beside the mill house, and

under the same roof, is the carpenter's shop, with a loft over, and at the back a

yard capable of storing about 500 tons of coals. Above, and by the side of the

stream of water which supplies power to the mill, is a small meadow of about

three-fourths of an acre, capable of being used as a timber, coal, brick, and tile yard.

The stream is pure and clean water, and has a never failing supply.

The harbour is capable of receiving vessels of up to 80 tons burthen, and may be

doubled in capacity at a very trifling expense.

The granite is of unobscured quality, and obtainable in any quantity and of any

reasonable size, and is suitable for every purpose to which granite is applicable.

It has been already extensively used for lighthouse building on the present Long-

ship lighthouse—a sufficient proof of its quality.

The demand for granite (especially of the Lamorna quality) is very great, and a

large and profitable trade can be confidently relied on.

As proof of the quality of granite in the neighbourhood, it may be stated that

on the opposite margin of the Cove there is a large granite quarry, which has been

worked at a considerable profit for many years, even with the great disadvantage

of having to send all the stone to Penzance for shipment, involving loss of time

and great expense for land carriage and harbour dues, expenses from which this

company will be entirely exempt. The stone from this neighbourhood has been

extensively used in New Government Dock and other works.

The property has been in a long time, and the quarry unworked to any extent for

a short time past owing to the death of one of the late owners, and delays (uncon-

nected with the property) having occurred in winding up his estate; but the

whole, with the working plant, has been carefully upheld and retained in good

order and condition, and considerable sums have been very recently laid out in

completing the buildings and preserving the plant, all of which are now in excel-

lent working order.

On the cliff, in a high position immediately overlooking the harbour, and within

almost speaking distance, stands a substantial stone-built, six roomed dwelling

house for a foreman, and about 30 yards from the sea is a spacious and handsome

dwellings house, with a large room (originally intended for a Chapel of Ease or

school room). This house is well and extensively built, and is capable of being

utilised as (for instance) a marine telegraph station or terminus, for which, in point

of both capacity and position, it is eminently adapted.

The portions thus far enumerated are leasehold for a long term, at an almost

nominal rent, of which about 30 years are unexpired. Royalty, 6d. per ton.

Besides these, there is a freehold cottage, with large garden; also about 3 to

4 acres of freehold land, bounded on one side of its whole length (nearly a quarter

this contract, with certificate of registration, and copies of the Memorandum of Association, plans of the property, and original report, may be seen at the offices of the company or at the solicitors.

STATEMENT OF PROFITS

Which may be expected, and which statement is based on the actual prices paid for the stone from this quarry by the Trinity House for the Longship Lighthouse.

Dressed ashlar, at 4s. 6d. per cubic foot; scappling, 1s. 1d.; and small, 1s. 9d. per cubic foot. Of these prices one-fourth are net profit, which gives an average (omitting fractions) of 9s. 6½d. per ton.

Then, with a delivery of only 120 tons per week (which is a small computation) the result is 120 tons, at 9s. 6½d., making £57 5s., which for 52 weeks is ... £2977

N.B.—This delivery might easily be trebled, for the amount of output is limited only by the labour employed.

Lime—say, 20 tons per week—at a moderate profit of 8s. per ton, is £3

per week, which for 52 weeks is ... 156

Nor is the burning of lime limited to 20 tons per week, for there is abundant space for more kilns. When lime was available

here it was found that the demand always exceeded the supply.

Moreover, in point of quality, nothing equal to the Aberthaw

lime made at Lamorna was procurable at or even in the vicinity

of Penzance, and it was in great demand.

Coals offer a prospect of delivering at least 100 tons per week, and would

yield a probable profit of 8s. per ton, which for 52 weeks would be ... 1300

Besides which there is a demand for slates, bricks, tiles, and drain-

pipes, and such like things, which would, at a very moderate com-

putation, yield a further profit of (say) ... 100

Giving a total of ... £4533

Deduct—Salaries, office expenses, &c. (say) ... 10 0

Leaves ... £3533

(N.B.—Costs of labour and royalty of 6d. per ton have been

allowed for in the calculation of above profits.)

Sufficient to pay interest on a paid-up capital of £25,000 at 12 per cent., ... 3000

And leaving a surplus of ... £ 533

This moderate estimate shows a profit sufficient to pay a dividend of 12 per cent.

on the entire capital, and will also allow 2 per cent. per annum to be set aside for a

sinking fund.

Besides the profits above enumerated there remains the mill, available for a

bone mill, a saw mill, or for polishing granite; anyone or all of which combined

must produce a further profit. There are also the freehold land and water-power,

available for any factory purpose, constituting another source of profit. Further-

more, there is the possible use of the harbour by adjacent stone proprietors, which

would be charged for and yield a profit.

Large orders are pending, and the facilities with which the stone can be shipped,

together with the great demand for granite, fully justify the above calculations of

immediate and substantial profits.

REPORT.

LAMORNA GRANITE QUARRY, AND HARBOUR, AND LAND,

NEAR PENZANCE, CORNWALL.

DEAR SIR,—In accordance with your instructions, I very recently went from

Lamorna and visited your Lamorna Harbour Works and Quarry, and the lands at-

tached thereto, and made myself acquainted with all the circumstances attending

the property as far as it was necessary.

Lamorna Cove, at which the quarry and harbour are situated, is at the south-east

point of the most westerly part of the coast of Cornwall, where a stream of water,

having a watershed of several square miles, discharges itself into the sea.

For some little distance up from the sea the property extends along the south-

west side of this stream, and above that for about a quarter of a mile, the land

extends along the north-eastern side of it. The latter portion is held under lease

for a long term, and the latter portion is a freehold, some of it being used as pasture

land, a small portion cultivated, and some left rough. The sea frontage extends

from the mouth of the stream at Lamorna Cove for about one third of a mile west-

wards, to a point whence the boundary of the property passes over the hill north-

wards, and ends at a point opposite to the stream before described, about 500 yards

from the harbour.

Within the area above described is contained a large mass of granite which is

capable of being worked, and for which the harbour forms an excellent outlet, not

only for this property but for that north of it, and for adjacent quarries, belonging

to other parties, and being worked on the opposite side of the valley on the north-

east of the stream before referred to, where, as well as on this property, there is

an inexhaustible quantity of granite of the best description.

The Lamorna Harbour Quarry has been worked, as I was informed, for about

five years, and the quality of the stone for engineering and architectural purposes

is unsurpassed; in proof of which may be stated that it has been employed in

building the present Longships Lighthouse, and some from the immediate neigh-

bourhood in the erection of the new Government Harbour Works, both at Ports-

mouth and Chatham, as also in construction of the Penzance Harbour and the

public buildings in that town.

The harbour itself is formed by a line of quay wall, built parallel to the cliff,

leading to a jetty or pier, together 323 ft. in length, and enclosing at high water a

sufficient area for carrying on a considerable trade, and affording to small shipping

good shelter from the Atlantic. Its area might be increased inland at a very

trifling expense by removing the large beach consisting of granite boulders, which

would afford material for constructing a breakwater on the eastern side of the

harbour. The latter is dry at low water, but at the high tides there is sufficient

water (ranging from 3 to 14 ft.) for small vessels to load alongside the jetty.

The bottom is fine sand, which is a good lying ground. It is perfectly sheltered

from the west wind, and is not entirely so from the south-west, being under the pro-

jecting point of land on the western and south-western side.

The works that have been constructed (and which are all of the most substantial

description) consist of the wharf wall, and the pier or jetty in the harbour, with

a fence wall on the sea side; also a higher wharf or platform, about 12 ft. above

the level of the jetty. Also a lime kiln, a quarry or travelling crane, extending

almost from the quarry to the edge of the wharf wall, at which point a powerful

crane, already erected, lifts the stone down to the pier, and places it on board the

vessels, and also good carpenter's and smith's shops, &c., and a water wheel

attached to a mill house, where machinery of any kind may be worked, especially

for polishing or dressing granite; and there is another powerful crane in the

quarry, and a considerable quantity of valuable working plant and tools.

A railway of the ordinary stone truck gauge is laid from the quarry to the gantry.

On the estate has been erected a good residence, containing ten good rooms, and

attached to which, and forming part of the same building, is a large room origi-

nally intended for a school-house for the children of the workpeople. There is also

a good foreman's house.

The quarry has been worked for some distance into the hill, and about 30 ft. deep,

and is proved to be the same fine granite that exists all over the area. The quality

of the granite is a good grey kind, differing only from the Aberdeen in containing

large quartz crystals. I measured some of the blocks in the rough, as they were

lying about, and as they came out of the bed, and I found them weigh from 3 to 5

tons. I estimate that there are about 200 tons in the rough state ready to ship, or

capable of being wrought for use before being shipped.

The prices for getting out and squaring the stones is reasonable, and is the usual

one paid for similar work in that country, whilst the advantages of the harbour

for shipment are not possessed by any other quarry round the coast.

I understood that in consequence of the death of one of the late proprietors of

the estate the operations came to a standstill, and the quarry has not been in work

for about two years, but during the settlement of his affairs no deterioration has

been suffered, or any depreciation in value, whilst the wharves and pier have had

the great advantage of having their solidity and durability severely tested.

The granite trade was the primary and principal object of the harbour and works,

but there are additional objects of very profitable trade and trade there—e.g., lime,

is in great request there, both for building and agricultural purposes, and can at

present be procured only from a distance, of an inferior quality, and at a price which

continues to be prohibitory.

Coals in like manner are in great demand all around, and there is a market for

some thousands of tons yearly, which might be supplied from Lamorna cheaper

than from Penzance, by the long land carriage being saved.

Timber, slate, bricks, and tiles of all kinds, and drain-pipes are in constant re-

quest, and would doubtless form the materials for a large and profitable trade;

and other granite proprietors would probably be glad to avail themselves of the

harbour at a moderate charge for cranes or wharf dues.

I may add that I engaged a very able and experienced surveyor to inspect this property

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
 (ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, NOV. 8, 1878.

IRON.				TIN.			
	£	s.	d.		£	s.	d.
Pig, smth, f.o.b. Clyde.	2	3	6	English, ingot, f.o.b.	66	0	0
" Scott, all f.o.b. No 1	2	—	—	" bars	67	0	0
Bars, Welsh, f.o.b. Wales	5	—	—	" refined	68	0	0
" " in London.	5	10	0	Australian	63	0	0
" Stafford	5	10	0	Banca	64	0	0
" in Tyne or Tees	5	5	0	Straits	62	15	0
Swedish, London	8	15	0				
Rail, Welsh, at works.	4	15	0	COPPER.			
Sheets, Staff., in London	8	6	0	Tough cake and ingot.	62	10	0
Plates, ship, in London	6	12	6	Sheet and casting.	63	0	0
Hoops, Staff.	7	5	0	Best selected	63	0	0
Nail rods, Staff. in Lon.	6	0	0	Flat bottoms	61	0	0
				Wallaroo	67	0	0
STEEL.				Burra, or P.C.C.	64	10	0
English, spring	13	10	0	Other brands	62	0	0
" cast	30	0	0	Chill bars, g.o.b.	67	10	0
Swedish, keg	14	0	0	PHOSPHOR BRONZE.			
" fag. ham.	15	0	0	Bearing metal	£105	0	0
				Other alloys	£110	0	0
LEAD.							
English, pig, common	14	17	6	BRASS.			
" " I.B.	15	5	0	Wire	7	d.	7½
" " W.B.	16	0	0	Tubes	7½	d.	7½
" sheet and bar	16	0	0	Sheets	8	d.	8½
" pipe	16	10	0	Yel. met. sheath. & sheets	8½	d.	8½
" red	18	10	0	Nails composition	8	d.	8½
" white	24	0	0	TIN PLATES.* per box.			
" patent shot	19	10	0	Charcoal, 1st quality	1	0	0
Spanish	14	10	0	" 2nd quality	0	19	0
NICKEL.				Coke, 1st quality	0	16	0
Metal, per cwt.	18	0	0	" 2nd quality	0	14	0
Ore, 10 per cwt.	34	0	0	Coke, per ton	18	0	0
QUICKSILVER.				Canada, Staff. or Glas.	11	0	0
Flasks of 75 lbs. ware.	6	15	0	at Liverpool	11	0	0
SPELTEN.				Black Tangers, 450 of	30	0	0
Wilean	16	15	0	14 × 10	—	—	—
English, Swansea	17	10	0				
Sheet zinc	21	0	0				

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than 10 quoted above, and add 6s. for each X. Tin-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The present dulness in trade seems to be occasioned in great part from an unnecessary amount of fear of the instability and insecurity of things generally. A good many people have lost their money, and, therefore, are most likely unable to operate, or if they have not realised their loss they are so heavily incumbered with superfluous and unsaleable stock that they are perfectly helpless; but at the same time there are a number who are quite free and possess means, and if they came into our market just now would gain an exceedingly great advantage over and above their predecessors, and although political, financial, and commercial affairs are still a little unsettled yet there is nothing apparently to create alarm. The decline in trade has been gradual, which has afforded an opportunity for all prudent people to economise their expenses, and as retrenchments have no doubt been made to a very great extent the position of people ought to be, and probably is, so much the safer. The smash up of rotten firms, and the fright of the winter, is now over, and the worst has passed, as evidenced by the ease with which the money market; and then, again, the British public will protest against any recourse to a discount of political jealousies; but, of course, while our Government acts foolishly, and realisations of bankrupt stocks are taking place, there cannot be any marked improvements in trade.

are taking place, the Sankovs or any marked improvement in trade.

If our country is to be a Pacific power, and it must be insisted upon, the nation would soon revive, for it is a warlike and enterprising people, suffering from more than anything else; but, on the other hand, if it is absolutely necessary to defeat the intrigues of Russia; then let us plainly tell her so, and have it out with her at once, and not be constantly meeting intrigue by intrigue, for an armed neutrality is worse than actual war. There is a vast amount of poverty and distress in the land, and the incomes of consumers are reduced; nevertheless, the country is so large, and the resources are so abundant, that it will finally reach the position of the commercial and industrial classes, and their circumstances will be undisturbed, and their power diminishes in proportion to the contraction of trade.

The disturbances which are now in operation do not appear to be of a serious character, and the moment we approach to the time of settlement the feeling of uneasiness will subside, and there will be stronger markets. The markets are encumbered by a large stock of goods, and it is more likely to prove their safeguard for the future, than a source of protection. The Government will profit by their past experience, and avoid repeating their former mistake, and they certainly will not add to their present burdens. Stocks have arrived at their maximum, and prices at their minimum, and any change must be towards improvement.

There are exceptional instances, of course, in which special reasons are prevailing; and owing to the foreign competition in iron prices that that metal are distinctly advanced. But the general feeling is one of coming forward to business, and recovery, and when once the spirit of enterprise prevails, all will be observed to quicken, and a very different state of things to the present will be forward.

follow, and a very different state of things to the present will be observed. It is a prudent step to take to husband resources when prospects are gloomy and difficulties are likely to arise, and it is a prudent step to be exercised. There is a limit to all things, and it is hoped that the utmost limit will not be reached. One would think that it had pretty well worn itself out, and that the time had arrived for buyers to be on the *qui vive*, and to enter upon forward contracts. We feel thoroughly convinced that this is the time above all others for consumers to book forward. If they wait much longer they will considerably jeopardise their chance. The prices are as favorable as any reasonable person can well expect them ever to be, and the probability is against increased reduction. From the point of view of prices, the present is remunerative, and in many cases the best of production, and thus the cost of production is further reduced, consequently they cannot afford to continue making sales at current prices much longer, and as there must be a certain amount of truth in the statement—for what everybody states must be true—it behoves buyers, and consumers in particular, to secure their immediate and perspective requirements. Stocks at cheap prices are no ill store, it is the high-priced stock which entails losses; but when a stock can be obtained cheaply it should always be made plentiful. We strongly urge consumers, dealers, shippers, and, in fact the whole trade, whether they buy or ship, to come forward with the least possible delay, and secure bargains.

Again then, in conclusion, we venture to press upon all who can afford to buy to do so without delay, and all who will not have cause to regret their purchases, and the losses they have been prevented from incurring may be greatly repaired. But it must be remembered that the losses have not been made by the fluctuation at the present prices, but chiefly upon very considerably enhanced rates. In the corresponding state of buyers there is fear of their overlooking the altered position of the markets. From the ridiculously high prices we have descended to absurdly low prices, but this is only the natural result of undue inflation at one time and extreme depression at another. Moderation, which should exist in all things, is perhaps as much unknown in commercial matters as in many other affairs of life. Men are so backward in acting upon their own judgment that there is no separate action to speak of, and until the whole body is spiritualised they forbear to move, but when once they are set in motion they are like a flock of sheep, and follow one another with such inconsiderate haste as oftentimes to pitch headlong over a precipice. Now, the Russian market is in a position where they obtain either from want of ability or means, this is the time to get snugly and well established. The cry will presently be taken up—'a rise! a rise!' and before there is time to turn round or think calmly about it the thing will be accomplished, and the few winners will have their laugh at the simple for their lack of energy and foresight.

ners will have their taught at the expense for their lack of energy and foresight. They will have to be content with the small gains of the incautious, and although we are not of an over sanguine temperament, yet we are not inclined to be being over cautious, for there is just as much to lose in the one way as there is in the other. But what do we find? Instead of buyers buying freely at the lower market prices they are actually more afraid to buy than ever; the very time they ought to possess most courage they have lost all, till at last the feeling gets abroad that there never will again be an improvement, but if buyers are going to wait till they have seen a second time that the market has become publicly known that the end of their days will come before any turn in trade occurs, they will have its catalogue of events, disasters, and calamities. Why, therefore, risk making so good a chance which may never occur again in the whole course of a life. There will be plenty of business to transact presently, and when the trade once gets into full swing stocks will quickly vanish. It will be the old story repeated, demand overtaking supplies, and enhanced rates demanded, and then those who have been sitting on their hands, and waiting for the time, will be benefited and rewarded for their wisdom. There are some people who will see a thing till it is too far gone, and then, of course, it is too late to act; and there are others who argue—Oh, what is the use of attempting anything by one self, if there is nobody else who will or can second your efforts! And so they go to sleep over their business, and afterwards wake up to find others have stole a march upon them. So, to be successful it is necessary to be ever vigilant and diligent, and to have a look at each other's interests, and to be ever on the look out for any new and powerful means to secure the best and surest method of doing business.

The display of these powers is now essential, and the business capacity of a man who can be assailed in a manner in which he avails himself of the exceptionally favourable opportunities afforded by the occasion. Does our country intend it? Does Providence bless us with a beautiful harvest, and are no blessings to attend it? Does the population of Great Britain increase, and are no blessings to be derived from it? Does civilisation and education advance, and are no blessings to accompany them? Is the development of our colonies nothing to us, and the opening up of India by the railway and telegraph system to bear no fruit to us? Is the progress made to produce wealth and to improve the world still to be of no use to us? Does not our very existence as a nation depend upon our exertions to render it more a success, and have we become so slothful and stupid as to allow it to fall into decay, and we have no strength left equal to the occasion? The reputation of Englishmen for energy and enterprise will indeed suffer if they do not immediately overcome the adverse influence which are still undermining the foundation of our material prosperity. It has been pretty borne long enough, and now the moral community is purified, how will we be able to rise higher, and that there will be more confidence displayed, and that our life will not be a failure.

embark in commercial affairs of a *bona fide* and promising character, and in that case the general resuscitation of trade will speedily follow.

IRON.—In again reporting upon the condition of our market, we have only to repeat that it is still in a most unsatisfactory state, and that the shipping trade in particular is extremely inactive. The reduced prices fail to produce their usual and desired effect of stimulating the demand, and there is evidently something radically wrong at work which checks the due development of the trade, and defeats the unceasing efforts of sellers to restore vitality. If the stagnation applied only to the iron market, sellers might despair of ever being able to mitigate the evil; but other markets are also affected, although, perhaps, not to the same extent as iron. Time seems to afford no relief, and instead of business getting better it gets worse, for whenever resellers consent to sell at a discount, the depression is greater. In various descriptions of unworked iron sellers have had to submit to lower rates in order to obtain work for the mills, otherwise they would have been entirely stopped; as it is, sellers experience the greatest difficulty in providing sufficient work to barely keep them going even for only a portion of the week, and the inducement for continuing operations is simply the hope which is so tenaciously clung to that brighter days may yet dawn upon the market, and that some compensation may hereafter be obtained for the present loss. Whether this ray of hope is a delusion, or whether a reasonable time is a question, and depends in a great measure upon the effective management of the trade. There is nothing to be declared in favour of the past control, and the existing state of things promises no improvement; everything turns upon future good government, and difficulties must be sternly faced and hardships endured if we are desirous of winning back the trade to the country. It is useless to make attempts in a half-and-half sort of way that will never succeed; it must be done in a bold and straightforward manner, and everyone should bear his fair share of the burden and put his shoulder to the wheel, so as to ride over and kill the productions of other countries.

The foreign competition seems to have taken ironmasters aback, and they were quite unprepared to encounter so strong an opposition. We are gradually, however, working down, and beginning to fight our opponents with their own weapons. Our prices are reduced, but we are still at a disadvantage, and the foreign producer continues to knock us over and out of the market by the display of lower quotation. The wages of our men are much less than formerly—so much so, in fact,

tions. The wages of our men are much less than formerly—so much so, in fact, as to cause the men to grumble, but it is useless to complain under present circumstances. What can't be cured must be endured, and the men will have to quietly submit for a time or go without work altogether, and we are inclined to think that before any long time has elapsed the wages of the Belgians will be further reduced. It is not that we are insensible to the interests of the men; quite the reverse; we want to see them in the enjoyment of more employment, and earning more wages, but this cannot be done without temporary sacrifice, for the English houses are being undersold, and consequently the work is executed elsewhere. The English workman will have to prove his powers of endurance, and work as cheaply as the Belgians, or some of the English masters may be lulling the Belgians to come over to work in the iron districts of this country. There is too much spent here in beer, which is ruinous to the constitution and empties the pocket. If men would drink less, and save more, there is no reason for supposing that they could not fare quite as well as foreigners, but it is the love of beer which makes them so dissatisfied and discontented with moderate or scanty wages in periods of depression. It is said that nine-tenths of our prisons would be closed were it not for the drunken habit of drinking rum. Industry and hard work would do much to remove these mistakes, and if the masters and owners would only make concessions to their tenants, and so endeavor to make the terms as easy as possible for all parties, the trade, instead of declining, might very soon be flourishing.

for all parties, the same, instead of settling, might have been made good.

But what was the result in the way of mutual concessions and affording a fair and proper understanding? Nothing whatever has been done by those who can best afford it, and the masters and men have hitherto had to bear the whole burden of misfortune, which, of course, presses exceedingly hard upon them. Landlords will, perhaps, wake up to a sense of their duty by-and-by when they find their tenants bankrupts, and their estates rapidly declining in value, and reduced to mere pastoral or agricultural districts; but it is not the rate of wages, the low wages, the neglects, the waste, that should be taken into consideration at once while there is time to save the wreck. Re-adjustments constantly have to be made in public companies when they fall into difficulties, and by which means valuable property is frequently saved from being wholly sacrificed, and what has been found to answer in public companies might very well be applied to a community. The principle of mutual concessions equitably arranged is all that is required, and the country would be benefited thereby.

It is very hard to see the men suffering from want of employment, and the masters incurring losses, whereas at the same time landlords are luxuriating in ease and affluence. Let them come forward and do their part in affording all the relief possible in their power, and there will then be no fear of a happy result. The highest should always be the first to set a good example, and their inferiors are more likely to follow, but as long as the masters will not do this, and the country is in such a state, it is not the least likely that already there are objections raised by both ironworkers and colliers to have their remuneration further reduced, for it is reported that at a private meeting of the South Staffordshire colliemasters and colliers held this week at Dudley after a short discussion, in which the men informed the masters that they could not work nine hours per day, the colliemasters said they had nothing further to say, and the masters made no answer, and a strike or lock-out if independent action followed, would be the result.

No agreement yet has been come upon the wages question in the manufacturing trade in the North of England in relation to the claim of 5 per cent. and the Board of Arbitration has appointed a Delegation to take up the matter. The trade is everywhere known to be in a worse state than it was at the present time; the stocks are heavy and accumulating, the demand is limping and diminishing, the prices are low and declining, and it will need a supreme effort to bring the markets round to a proper and satisfactory condition. Unless force alone can do it, and anyone who holds back, and tries to shirk his portion of the burden, well deserve to be visited with a greater calamity, and lose his all. Men should be of one mind in this matter, and endeavour to overcome the distressed state of the trade by united action. The greatest obstacle may be made to yield sufficient force to the demand to be met, and the greatest obstacle may be made to the trade, and estates would only forego part of their claims for a time that the masters and men would do their part in pulling the trade through again. But what would any mineral property be worth without labour to work it? Nothing at all, therefore the owners of such property owe much to the working classes, and to those who take it in hand, and every consideration for their welfare should be studied. It is no answer because the markets were once inflated, and advanced to an unnatural and unprecedented height, and that the landlords did not participate in the improvement, and that the working classes were not made to participate in the improvement, that the majority had better been without a far as it has brought more mischief upon us than anything else. Many a wealthy man loses his riches, but that is no reason why he should not receive help, especially when by affording that help it leads to the salvation of one's own property. Duty demands sacrifices, and voluntary sacrifices, and they should not be withheld, for the trade is gradually sinking into the most desponding condition. It would almost seem that agitation is necessary, and landlords would be sure that if an agitation got up in the country that the reversion which would follow would bear hard

upon them than y^e self-denial they might voluntary impose upon themselves
It is a question of life or death. Are we or are we not to retain the iron trade
or will the exacting terms so stringently enforced by landlords be allowed to bring about
ruin and destruction to one of the most important branches of the manufacturing
industry? The answer must be given by making a negative answer to the proposed
request for lower wages. They should find out what others intend doing in the same
as much, if not more interested, and who, at any rate, have a large stake in the
matter. If the landlords will reduce their rents and the masters their prices, the
men may submit to have their wages reduced, for they may rest assured that by
all combining the cost of production will be so much reduced that foreign compe-
tition could ultimately be overcome. The monthly reports from Scotland speak
of the greatly depressed state of the trade, and that makers' iron and warrants
are considerably reduced. The highest price paid last month was 46s. 3d., and
the lowest 42s. 4½d. The average was 44s. 9d., and 50,578 tons, worth
£2,240,000 were produced for circulation, as against 188,880 tons, worth
£7,500,000 in the corresponding month of 1861. The increase of stock over
the 1st inst. was 65,400 tons, being a decrease of 1740 tons, with warrants in cir-
culation for 65,300 tons. The market is easy at 63s. 6d. mixed numbers cash.

SHIPMENTS.		
For the week ending Nov. 2, 1878.....	Tons	8,702
For the week ending Nov. 3, 1877.....		8,278
Increase		429
Total decrease for 1878		52,279
Imports of Middlesbrough pig-iron into Grangemouth :—		
For the week ending Nov. 3, 1877.....	Tons	5,618
For the week ending Nov. 2, 1878.....		4,735
Decrease		883
Total decrease for 1878		2,252
FURNACES.		
In blast Nov. 3, 1877.....		88
In blast Nov. 2, 1878.....		85

In Sweden bar iron there is very little sold, and prices are somewhat lower. The close of the season leads to impatient buyers, and the fall in the Indian market there interferes with shipments to that part.

TIN.—This metal occupies the most prominent position in our market at the present time, and, therefore, is deserving of the leading place in our columns. Since the attention of the trade has been particularly drawn to it we deem a more lengthened report than ordinary will be read with interest and satisfaction; and considering to what a serious extent our tin mining districts have suffered during the last year or two, we have considerable pleasure in pointing out the wonderful change which has lately come over our market, a change of the greatest importance and of the highest value, and on which all sellers should combine in upholding and supporting. The enhanced prices are not detrimental to consumption, otherwise we should not recommend them, and there is no fear of the demand falling off yet awhile on that account, and we feel strongly impressed that in a very short space of time 70% will soon be reached. Consumers have been duly warned by us of the

be reached, consumers have been duly warned by us of the coming scarcity, and although we do not predict famine prices yet we think the trade may look for considerable higher rates. We maintain, however, more than that. As regards English rice there was, as is well known, a large surplus stock at the beginning of the year, which has been absorbed in addition to the usual supplies of this kind. The deliveries or consumption will assuredly be more than 1200 tons per month, as consumers are as bare of stock as they can possibly be, owing to the constantly declining price and the consequent disappointing purchases. Moderately higher prices will neither check consumption nor accelerate production.

This is amply proved by experience. The figures at the time of the last great rise from 1868 to 1878, when the price reached about 150%. Taking from six months to six months the deliveries were:—

First half, 1868	tons 4,700	Second half 1870	tons 4,600
Second „ 1868	5,900	First „ 1871	6,200
First „ 1869	4,300	Second „ 1871	6,600
Second „ 1869	5,100	First „ 1872	6,400
First „ 1870	5,500	Second „ 1872	6,200

clearly showing that the high prices did not check consumption. Altogether statistics have shown that consumption of tin is steadily increasing. There was no real ground for the fall from the end of July, when we were 61*l*. 10*s*., to the beginning of October, when prices reached 53*l*. The total London stocks, spot and afloat, were on July 31, 1878, 12,455, against 12,170 the year before, therefore hardly any accumulation. They remained stationary—(say) 12,571 on August 31 and 12,349 on Sept. 30, or, with the corrected Australian shipments, 12,149 tons. We can, therefore, not trace any cogent reason for the fall except the financial pressure, and if buyers had taken advantage of our advice they would have bought well. Instead of that, dealers took to “bearing,” and were allured by the fall to increase their stakes. As soon as the pressure put on by the banks and lenders ceased there was the natural rebound to the old prices which ruled before the semi-panic commenced. As regards the future, we will for a moment speculate how statistics will probably look on December 31, compared with last year. The London stocks, spot and afloat, on October 31, 1878, were 11,540 tons. The shipments from the Straits in the last two months of last year were 690 tons, and we fancy they will reach about the same this year.

The shipments from Australia in the two last months of last year were 2550 tons; but from the best sources of information we may confidently assert that they will not surpass 1600 tons this year. It is not to be forgotten that last year most of the Australian tin was shipped by sailing vessels, which generally leave in November—March (the October shipments, therefore, were only 120 tons), while this year nearly all the tin has been shipped by steamers, which leave regularly, and, therefore, make the sailings of tin also more regular. The deliveries for November and December we compute at 2400 tons minimum, for there is no doubt that consumption has steadily increased, and will remain at its highest. A number of new uses have been found for tin, and many manufactories built which use this metal for purposes not known before. The probable stock on Dec. 31, 1878, will be 11,430 tons, while the stock on Dec. 31, 1877, was 11,787 tons; therefore, a decrease, or a proof that consumption has, to say the least, equalised the large production, quite regardless of the price consumers have to pay for it. As regards production, it is to be hoped that it will keep pace with consumption, although the latter has been increasing lately much faster than the former. Should this state of things continue the stock may decrease to an alarming extent, and the prices approach to a much higher level, and may even reach to that which ranged in 1872, when 150*l*. was considered the normal value. The shipments of tin from Australia during October have just been telegraphed as 744 tons. Some telegrams say 620 tons, which is supposed to include the Nineveh.

COPPER.—This market has temporarily fallen into obscurity, and all interest has ceased to be taken in it for the time being; the deliveries are not so satisfactory as could be wished, and the charters for the last half of October from the West Coast are 2600 tons. The Indian exchange being low and weak causes merchants to withhold their orders for manufactured and yellow metal, and the few orders that might be obtained remain at impracticable limits.

LEAD.—The tendency of this market appears downward, although prices are so very low, but it is thought by those best acquainted with the trade that a sharp reaction might set in at any moment.

TIN-PLATES.—The demand is improving, and higher prices have been paid for cokes.

QUICKSILVER has been very slow of sale, and the tendency is still downwards.

THE IRON TRADE.—(Griffith's Weekly Report).—Friday evening. The Glasgow market for Scotch pig-iron has been steady this week. The market opened this morning at 43s. 6½d., improved to 43s. 8½. cash, but closed again rather easier, with sellers at 43s. 7d. prompt cash, and buyers in a week. A reduction this week of about 3d. per ton. We quote makers' No. 1 iron—Gartsherrie, 51s. 6d.; Coltness, 53s.; Calder, 52s. 6d.; Linganoe, 53s. 6d.; Summerlee, 53s. 6d.; and Glasgow, 54s. 6d., f.o.b. Glasgow. Glengarnock, 49s. 6d. Edition of the "Glasgow Advertiser," 53s., f.o.b. Leith. We have no material change to report in the iron trade this week. Orders for the normal demand are constantly sent from this market down to the works. We have had a little more activity in orders for the Government dockyards. We believe the Earl of Dudley, at Round Oak, and Robert Heath and Son have received orders from this source. Some Government orders have also arrived from India for the best bars and specialties. The demand for sheet-iron is the most steady, and there has been a goodly demand here in this class of galvanising purposes. The demand for the commonest form of sheet-iron for the use of merchants is getting excited by Belgian arms. Alexander Sohier and Co., of Monceau-on-Sambre, took an order yesterday for 1200 tons of nail-roads in this city for a foreign market. The general feeling of the market is quieter, and orders are given out with more caution. Prices unchanged. The works in the country are rarely busy. Lowmoor, the Earl of Dudley's Round Oak, and Robert Heath and Son, are exceptions to this rule. All these are busy, and well off for orders. The tin-plate trade is precisely in the same state as when we last wrote. Tin is now worth 60s. per ton, the make of tin plates is not so good as it was some time since, and the quantity of this month, which will diminish the consumption by 25 tons per week, or 1300 tons per annum. The Swansea agreement is to hold for twelve months.

The MINING SHARE MARKET has again relapsed into general dullness; there is scarcely any business doing, and prices remain stationary and nominal.

TIN MINES show no change, and although tin itself has risen in price considerably within the last few days, the standard for ore has not been further advanced. Dolcoaths are quoted 28 to 30; Carn Brea, 35 to 40; Tincroft, 8 to 9; Cook's Kitchen, 12s. 6d. to 17s. 6d; South Condurru, 10½ to 10½; Wheat Agar, 4 to 4½; Wheal Grenville, 2½ to 3. At West Godolphin meeting the accounts showed a loss of 577*l.* on five months' working, and a debit balance of 473*l.*; a call of 2*s.* per share was made. East Pool, 8½ to 9; at the meeting, on Monday, the accounts for three months showed a profit of 1194*l.*, out of which the balance of the old "suspense account" (688*l.*) was paid off, a dividend of 1*s.* 6d. per share declared, and a balance carried forward of 22*l.* The costs for three months were 4208*l.*; merchants' bills, &c., 2100*l.*; the returns—tin, 3481*l.*; tinstone, 1829*l.*; arsenic, 600*l.*; copper, 1849*l.* The report was favourable, and the mine never looked better than at present. At Wheal Owles meeting a call of 12*l.* 10*s.* per share was made. The accounts showed a loss on four months' working of 225*l.*, and a debit balance of 20,193*l.* The stock of tin in hand is said to exceed 400 tons. The mine is said to be looking well. At West Poldice there was a penutribal balance of 1979*l.*, and a call of 1*l.* per share was made. Penstruthal, 3*s.* to 5*s.*; South Frances, 5½ to 5½; West Bassett, 2 to 2½; West Frances, 2½ to 2½; Wheal Kitty, 1 to 1½; Wheal Boreas, 6 to 6½; Wheal Tyny, 12s. 6d. to 15*s.*

COPPER MINES are quiet, and show no great change. DAYTON GREAT Consols are very flat at 15s. to 25s.; Mellanear, 3½ to 4; Wheal Gribor, ½ to 1. Parys Mountain, 3s. to 5s.; the 90 south looks more promising and yields small strings of rich copper ore. The Prince of Wales meeting, on Friday, is to be made special, to decide upon future operations, or selling the mine as a going concern or otherwise. There seems to be a fair prospect for silver, as several pitches, were told, could be set. Morfa Du, 15s. to 17s. 6d.; the lode continues worth 6 tons per fathom in the bottom level, and ore will soon be raised now from the 3d. South Caradon, 50 to 60; West Selton, 29s. 4d.

LEAD MINES are the most active, but prices for the most part are merely nominal, and give way on the least pressure of sales. Van, 14½ to 15½; the 105 west is worth 100¢ per fathom. The 105 east is producing lead and blende, and ground more favourable for the production of ore. The sale on Nov. 14 will be 500 tons of lead and 150 tons of blende for the month. Roman Gravel, 6 to 6½. Tankerville, 3 to 3½; the lead ore for the month. 100 tons, realized 965¢. East Van, 1½ to 2½; nothing has yet been discovered here in the bottom level. Great Laxey, 14½ to 15½; Pateley Bridge, 3 to 3½. At Herodsfoot meeting the loss seems to have absorbed the balance in hand, and there is now a debt of 894. 3s. A special meet-

ing is to be held on Nov. 19 to consider the propriety of any further prosecution of the mine. Glenroy, 3 to 5; the lode in the shaft is 5 ft. wide, and has good indications for ore.

Rochope, 3 to 5; D'Esby Mountain, 30 to 40 per 1024th; the stone-brake will shortly go to work upon the accumulation of leadstuff at No. 4 stope. D'Esby Consols, 8 to 10; the east and north lode upon which they are driving to cut the Cobblers' lode still lets out a flood of water, and is easier to work. Aberlynn, 10 to 12; the surface operations are being hurried on, so as to get to work returning the blende as soon as possible. South Roman Gravel, 4 to 4; the small engine has got to work, and sinking commenced on the Sawpit vein, which is improving beyond anything before seen in the mine.

Leadhills have declined to 1½, 2; full particulars of the meeting will be found in another column. The accounts presented show sales of lead ore for the year ending June 30, 29,012. 8s. 10d.; lead and lead ore in stock, 6677. 12s. The expenditure was 31,284. 19s. 10d., leaving a profit on the year (taking credit for 6677. 12s. ore in stock) of 4403. 1s. 2d., out of which a dividend of 3s. per share: 3062. 10s. was declared in April last, and there is a balance in hand of 1471. 0s. 5d. Tyn-y-Fron, 20s. to 30s.; West Chiverton, 15s. to 20s.; West Pateley, 1½ to 2½. Grogwinion, 2 to 2½; this mine sold 100 tons of lead ore on the 5th for 9½ 6s. per ton. West Wye Valley, 2 to 2½; sells to-day 40 tons. Wye Valley, 1½ to 2½; Caron, 2 to 2½; Hartington, 1½ to 2; Mawston, 50 to 55; Red Rock, 2 to 2½; Frongoch, 2 to 2½; St. Harmon, 2 to 3; South Camystwith, 2 to 3.

FOREIGN MINES.—Cape Copper, 27½ to 32½; Colorado, 2 to 2½; Chontales, 10s. to 12s. 6d.; Blue Tent, 2½ to 3; Hultafall, 3 to 3½; Don Pedro, 8s. to 10s.; Eberhardt and Aurora, 3½ to 4; Flagstaff, 4s. to 6s.; Frontino and Bolivia, 2 to 2½; Javali, 4s. to 6s.; New Zealand Kapanga, 17s. 6d. to 22s. 6d.; New Quebrada, 1½ to 1¾; Port Phillip, 9s. to 11s.; Richmond, 3½ to 10½; St. John del Rey, 20 to 30; Santa Barbara, 30s. to 35s.; Pitanguit, par to ½ prem. Placer-ville, 2½ to 2¾; both shaft and winze are going down in good ore.

The Market for Mine Shares on the Stock Exchange has altogether relaxed during the week, it being at present almost impracticable to do any business whatever, and prices with very few exceptions are merely nominal, owing to the almost complete absence of buyers at any price. The dealings to-day were confined to South Condurow at 10½, New Quebrada at 11. 11s. 3d., Richmond at 10, and Rio Tinto 7 per cent. bonds at 14½, and shares at 3½.

Subscription lists will be opened on Monday and Tuesday only for 8,500,000. Five per cent. Egyptian State-Domain Mortgage Bonds at the price of 73½ for every 1000. nominal capital, which is equivalent to 6½ 17s. per cent. interest on the investment. The terms of the issue are given in the prospectus, published in another column of to-day's Journal, and applications are to be made to Messrs. N. M. Rothschild and Sons, in London, and Messrs. Rothschild Brothers, in Paris. It is expressly stated that neither the British nor French Governments accept any liability to pay in any contingency the interest on this loan, but they undertake the nomination of receivers or managers, in order to provide to the creditors a security that such receivers shall not be divested of their functions without the consent of the Governments nominating them. The present net revenue of the lands and houses surrendered by the Khedive and his family, and to be hypothecated in security for the loan, is 427,450, which is alone nearly sufficient to pay 5 per cent. on the entire sum of 8,500,000, and it is likewise provided that in case the revenue of the said property should not suffice to meet the amount required for the service of the loan, the deficiencies will be covered by the general revenues of the Egyptian Government. The hypothecated property is to be managed by three persons—one an Egyptian, and the other two nominated by the English and French Governments respectively. A certificate from the Cadi of Cairo, duly legalised, proves that the cession of the property has been duly registered, with all the formalities required by Mussulman law, in the registers of the Grand Mokhemeh of Cairo, and that the Egyptian Government are the legal proprietors of the whole 427,450 feddans, 10 kirsat, 12 sahm, with the exception of 9591 feddans and some fractions, which belong to the Princess Thahibah Hameh, which are mortgaged to certain absent creditors, whose presence was necessary to make a legal transfer. The loan is to be issued in bonds of 200, 400, 1000, and 10000, which are to be paid for by instalments extending to May 19, 1879, and are considered to be a good security.

The Colonial Trusts Corporation case will, it is understood, come before the Master of the Rolls to-morrow (Saturday), and every shareholder should exert himself to see that no material fact connected with the lamentable affairs of the corporation are kept from his lordship's knowledge with a view to screen any individuals to the prejudice of the general body of shareholders. Can it be true that as long ago as August Messrs. Kemp, Ford, and Co., after due examination, by desire of Mr. W. D. Freshfield and Lord Bury, reported unfavourably on the condition of the Colonial Trusts Corporation in the company's name, and yet no steps were taken to have a complete audit of the whole of the corporation's assets, or to attempt the restoration of the company? It has been stated that the present great loss of capital is spread over a period of years. In connection with the Transvaal Gold Mining Company, 54,413; the Mysore Coffee, 84,121; T. D. Meppen, 22,414; Dyffke Lead Mining, 38,101; Penang Plantations, 11,955; Saseo Port Collieries, 11,826; Carbide Company (including debenture debt), 34,635; Messrs. Hore, 53,104; Lamplugh Hematite Company, 6000; advances to directors, 5000; guarantees, 30,000. What is the present or prospective value of the interest of the Colonial Trusts Corporation in these assets? What has the general manager done to protect the shareholders as a body? Is it true that the directors and officers of the corporation "have had to resort to financial schemes, which conclusively show the rottenness and insolvency of the Trust for years past?" If so there can be no doubt that the shareholders should "remit any claim made by a liquidator until legal means are enforced for the recovery of these men's estates, which in a few years will produce sufficient to recover all the losses incurred by them. Far better the hearths and homes of these few men should be desolated than the hearths and homes of the hundreds of widows and orphans, ladies, and clergymen so graphically described in Mr. Kemp's speech." If, on the other hand, the collapse of the trust be due to actual misfortune arising out of the recent depression of trade, both shareholders and creditors should unite to bring the resuscitation and restoration of the corporation to a successful issue.

Richmond, 9½ to 10½; abstracts of Mr. Probert's reply to the report of the committee of the investigation and of the circular of Messrs. Stuart, Maybury, and Pulbrook are published in another column, with comments upon them. The requisition for calling an extraordinary meeting for the removal of Messrs. Stuart, Maybury, and Pulbrook from the board was signed by 118 registered members, holding 17,255 shares (the total number of shares in the company being 14,000), so that unless three-fourths of the remainder support them their removal may be considered certain; but it should be distinctly understood that such removal will not in the slightest degree reflect upon the integrity or reputation of the gentlemen removed, since it may be assumed that the principle of action is this:—It is indisputably proved that their views are so diametrically opposed to those of the other members of the board upon all essential points that the two sections cannot carry on the company's affairs, so that the sole business question in which of the disturbing elements shall be annihilated; and perhaps, recognizing the good old maxim that "devil known is better than a saint unknown," it is not unreasonable that a large majority of the shareholders should, without desiring to reflect upon others, prefer tried officials, who, however incompetent, have succeeded in earning 55 per cent. per annum for dividends, to those who can only offer their own opinion as guarantee that they can do better.

Flagstaff, 3 to 4; the applications that have been made to the Court, first by Mr. Thornhill and then by Mr. Snell, to acquire the conduct of the appeal in the case in the suit of Tarbet v. Flagstaff Company, came before the Master of the Rolls this (Friday) morning after numerous adjournments during the vacation, and were dismissed with costs as against both applicants. Some very severe remarks fell from his lordship during the hearing; he said that he very much doubted whether the application was a bona fide one, and that he had grave suspicions that the application was made in the interest of Mr. Davis, and concluded by saying that they were wrong in form, wrong in principle, and wrong in motive.

The Sierra Nevada (Comstock) has shown no new feature since last advices, except that the cross-cut run on the 2100 level has been pushed 6 or 8 ft. further in, showing the ore to be very solid, and of the richest character of chlorides and sulphurets, and in cutting out for the 2200 station very rich ore is being exposed. Assays of samples from the bottom of the incline yield \$289, \$383, \$173, and \$126, making an average of \$243; some assays yield as high as \$500 to \$800, and one over \$1000. Preparations for sinking another incline are going rapidly forward. Working is being pushed with great energy in all parts of the mine.

The market for hydraulic or gold washing shares is without change; prices continue nominal. There has been some amount of rain on the Pacific Coast, and appearances were favourable for a continuance. Blue Tent, 2½ to 3; washing has been suspended for a time, owing to some necessary work at the dams having to be done; but preparations for the coming season were being pushed ahead with a full force. Birdseye, 3 to 4; the agent writes that he expects to do better during the coming season than at any time since the company was formed. At Fall Creek Water Company's works very good work has been accomplished so far in adding to the capacity of the lakes and reservoirs. A considerable quantity of water has been sold, and the prospects for the future are considered good.

Lead mines have been somewhat better supported, partly traceable, no doubt, to the improved aspect of other investment markets.

Van, 14 to 15; the 105 west is worth 1000. per cubic fathom for lead ore. The same level east is looking more kindly for ore, and producing more lead and blende. Other parts looking well, and without change. The usual four-weekly sale will take place on Wednesday, when 500 tons of lead and 150 tons of blende will be offered.

Grogwinion, 2 to 2½; the manager's monthly report is published in another column. Frongoch, 2 to 2½; the whole of the first issue of shares has been subscribed for and allotted, and the works at the mine are in active operation. Wye Valley, 1½ to 2½; the monthly report states that the lode in the bottom level is of a promising character, and improving as it approaches the ore ground passed through in the upper levels. The 22 east is also looking well, and it is expected that in about another month it will enter into the ore ground in Tippet's shaft. The tribute pitches are looking well, and another parcel of lead will be sold during the current month. West Wye Valley, 2 to 2½; a parcel of 40 tons of lead ore was sold yesterday. The mine is looking well, and the rise from the 52 to the 40 east is very productive ore ground, with prospects of further improvement. Caron, 2 to 2½; at the meeting on Monday the Chairman stated that good progress was being made in dressing the ore, and that in a few days a first parcel would be sold. More ore is being discovered than is taken away, and at any time the output could be doubled. The lead is of good quality, and contains a fair percentage of silver, and it is believed that a good future is in store for the company. Red Rock, 2 to 2½; the lode in the bottom of the mine is still improving, and yielding a good deal of ore, as also are the stopes below the eastern shaft, which are yielding fully 2 tons per fathom. Another parcel of 40 tons of lead will be completed in a month.

Mineral Corporation, 10 to 11; no detailed report had been received up to Friday morning, but it is stated that the development of the Hafna Mine is progressing satisfactorily, and that there has been an important improvement in the No. 3 adit. The lode in the other adits are said to be also looking as well as could be desired. A detailed report is promised for next week.

Pant-y-Mwyn, 4 to 4½; the mine is reported to be opening out rich in depth. The ore recently intersected at the Modlyn shaft is thought to be a continuation of the great course of ore at Griffith's shaft. The success attending the development of the mine is reviving the fame of the celebrated Modlyn district. Pateley Bridge, 3 to 4; The 30 east on Lake vein is worth 1½ ton per fathom. The 20 east on the same vein is looking very promising for an improvement, and is carrying a rib of lead ore about 1 in. thick on the footwall. The other parts are without any material change to notice. West Pateley, 1½ to 2½.

Subjoined are the closing quotations:—Ashtown, ½ to ¾; Devon Great Consols, ¼ dis. to ½ prem.; East Caradon, ¼ to ½; East Van, 1½ to 2½; Great Laxey, 14 to 16; Kingston Down, ¼ to ¾; Marke Valley, ¾ to ¾; Pateley Bridge, 3 to 3½; Roman Gravel, 4½ to 5½; Tankerville, 3½ to 3¾; Tincroft, 8 to 10; Van, 14 to 16; West Chiverton, ¼ to 1½; West Pateley, 1½ to 2½; Wheel Grenville, 2 to 3; Almada and Tiritio, ¼ to ¾; Birdseye Creek, ¾ to ¾; Blue Tent, 2½ to 3; Cape Copper, 27½ to 28½; Cedar Creek, ¾ to ¾; Chontales, ¾ to ¾; Colorado United, 2½ to 2¾; Don Pedro, ¾ to ¾; Eberhardt and Aurora, 3½ to 3¾; Eschschuer, ¾ to ¾; Flagstaff, ¾ to ¾; Frontino and Bolivia, 2 to 2½; Hultafall, 3 to 3½; Kapanga, ¾ to 1½; Last Chance, ¾ to ¾; New Quebrada, 1½ to 1¾; Oregon Preference, 2 to 2½; Pestarena, ¾ to ¾; Placerville, 2½ to 2¾; Pumas Eureka, 2½ to 2¾; Port Phillip, ¾ to ¾; Richmond, 9½ to 10½; St. John del Rey, 20 to 25; Sierra Buttes, 1½ to 1¾; South Aurora, ¾ to ¾; United Mexican, 3 to 3½.

COLLIERIES.—Business continues very dull, and very few shares have changed hands during the week. The prospects of the coal trade are, however, showing some signs of improvement, and if a peaceful issue to the present disturbed state of political affairs can eventually be arrived at, there can be no doubt that a rapid and satisfactory reaction will soon be seen in our coal and iron trades. Otherwise, though we believe that the improvement will still come, we must be satisfied to see the more gradual growth of better feeling and more stable and profitable business. Meanwhile, the winter season comes as a boon to many collieries whose fuel is suitable for household purposes. Already some districts are very much more busy in supplying London and other large centres with house fuel, and this winter demand will go a long way towards carrying the collieries on until trade and politics grow more cheerful. Reports from Derbyshire, Yorkshire, and Durham are all to the effect that the tendency of the coal trade is favourable, though at some of the collieries gas coal is slow in clearing off. We do not for a moment believe that this is in the slightest degree due to the electric light scare. It arises solely from some of the larger gas companies having overstocked themselves, in anticipation of a probable rise in the price of coal. With regard to the electric light, some apprehension appears to exist in the minds of uninformed or insufficiently informed people that the advent or successful adaptation of this light for general lighting purposes would be a serious blow to the coal trade. We think this is an entire mistake. In the first place, the whole consumption of coal for the manufacture of gas in this country does not represent more than about 5 per cent. of the annual output. However successful the electric light may eventually prove, it would be folly to suppose that gas as an illuminating power will soon become a thing of the past. Many years will elapse before such can be the case, even if ever it does come about. The introduction of gas did not shut up all our candle manufactories, nor ruin the candle or lamp makers. Nor will Mr. Edison's or anyone else's invention quickly bring ruin upon our gas companies. Moreover, coke, at present one of the products of gas manufacture, is essential and absolutely necessary for many of our manufacturing processes; and a given quantity of coke must be produced, whether as a waste product of the gas factory or as a material specially manufactured to supply an inexorable demand. Coal must be used to produce coke, and under all the circumstances of the case, gas coal owners need not yet lament the loss of their properties. Shipments of coal are again creeping upwards, the Humber ports having cleared 8559 tons more than the previous week's exports. South Wales has been more busy shipping iron. This district has, perhaps, suffered more from the recent depression than any other; but the people of the Principality are fully alive to the fact that their coal field has a great future before it, and instead of being cast down by bad times, they have been energetically developing their resources, and are now in a position to do a better trade and make more money out of it than at any previous period of their history. Amongst the largest and most valuable collieries and ironworks in South Wales attention should be given to those of the Ynyscedwyn Company, whose property combines a very large area of the anthracite coal of high quality, and iron and steel works from which metal can be turned out in superior quality and at a cheaper rate than at most works. The company which formerly owned this property paid dividends as high as 50 per cent. upon a capital of 100,000, while the present company's capital is only 60,000, in 10½ shares. The shares are now quoted at par, and should be well worth the attention of investors who like good management and safe security for their money. Altrani shares are steady, at 3 to 3½. The land sale referred to be started in the morning, proving, and we hear that special attention is now about to be given to the valuable clay on the property. Llay Hall (6 to 8) is reported to be doing a good business. Chapel House (3 to 3½) is as busy as usual, selling all its coal at good rates, and pushing on its works of development with great energy. Cardiff and Swansea are at ½ to ¾; New Sharnston, 3 to 4; Newport Abercarn, 4 to 4½.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: Tin Mining in Larut—No. III. (P. Doyle); On Underground Haulage—No. II.; Economy in Filling Ships; Machine Mining—the Eclipse Drill (E. Edwards); the Great Northern Railway (W. J. Thompson); City of Glasgow Bank—Unlimited Liabilities (R. Tredinnick); New Quebrada Company; the Richmond Mine; Richmond Consolidated Mining Company; Economic Manufacture of Zinc (C. Boudry); Prospects of Cornish Mining (C. Bawden); Lead Mining; the Cornish Pellet Company; Mining in France; the French Pellet Company; the Pellet Mine; Jones and Houston; J. Roberts; T. Hughes; Old Trebovir Mine—the Metallurgical Uses of Tungsten—Registration of New Companies—the Scotch Mining Share Market—Foreign Mining and Metallurgy—Almada and Tiritio—On Force-pumps with tubular Rods—Conversion of Non-chilling Iron into Chilling Iron—Direct-acting Steam-pumps—Propagation of Wave Motion—Patent Matters—Meetings of United Mexican, West Godolphin, Caron, North Hendre, East Pool, and West Pateley Bridge Companies, &c.

THE FRONGOCH MINE.—As an illustration of the fact that capital is always forthcoming for the development of mines in tried and well proved districts, we are glad to announce the formation of the above company with a capital of 25,000, in 12,500 shares of 2l. each, 1500 shares being kept as a reserve; the remaining 11,000 shares have all been subscribed for, and allotted. Mr. J. Kitto has been appointed manager. In another column will be found a report furnished by Capt. N. Bray, who has an intimate knowledge of the capabilities of the property, and of the district in which it is situated.

THE CLOGAU (WELSH GOLD) MINE.—Occasional stones containing rich gold have been met with on the branch lode, although the ground has changed in the last fathom driven, the indications being that at last the shoot of payable ground has been driven through. Within the last few days good gold has been met with in the 15 ft. stope; but more ground will have to be broken before an opinion can be formed of the value of the shoot. During the month the Britten pans crushed 500 lbs. of ore, which yielded 79 ozs. 1 dwt. of gold.

LEADHILLS SILVER-LEAD MINING AND SMELTING COMPANY.—The third meeting of shareholders was held at the offices of the company, Finsbury-circus, yesterday. The reports presented were of a very satisfactory character; the supplies of ore are ample, the new developments are opening up well, and nothing is necessary but a slight rise in the price of lead to enable the directors to make handsome returns to the shareholders. A full report of the proceedings will appear in next week's Mining Journal.

RICHMOND.—The reply of Mr. Probert to the report of the committee of investigation has been issued during the past week. Mr. Probert finding himself called upon to prove the negative of a series of propositions, all of a more or less injurious nature, instead of attempting to deal with them in detail selects a few of the more serious of the charges brought against him, and treats these exhaustively, with the avowed object of showing that his accusers are unworthy of credit. By this short and effective method he saves himself and the shareholders a great deal of trouble, and it certainly appears that he has attained his object. By introducing documentary evidence of an unimpeachable

nature, he completely disproves the most compromising allegations of the committee, leaving them in the unenviable dilemma of persons who have either been themselves deceived or have been negligent of the confidence placed in them. Under the first division of his subject, while treating of the mining prospects, he shows very clearly that, so far from having "not permitted" expiations to be carried out towards the quartzite, he was among the most urgent to have it done, and was quite at one with Mr. Rickard in his views as to the formation as well as the mode of prospecting Ruby Hill. This is shown by the numerous passages extracted from his correspondence with Mr. Rickard, who also himself bears testimony to the fact that Mr. Probert did not force any particular theory of his own on him or the smelting furnace. Indeed, the internal evidence of these letters is irresistible, and the passages quoted further show that the committee made a most improper use of them. In the next division (the smelting works) it is shown that the hydrocyle furnaces had been most unjustly libelled by Mr. Eilers and the committee, the former having described them as being too small for profitable use, while the latter proved them a dead loss to the company. It appears now that Mr. Eilers represented them as of half their true capacity, while the latter double their original cost, and both carefully select a month for the purpose of making a comparison between them and the stone furnaces, and also considerably understating the quantity of mineral smelted by the hydrocyles. This is fully exposed, as well as many others.

GOLD RUN HYDRAULIC MINING COMPANY.

The annual meeting of shareholders was held at the offices of the company, Finch-lane, on Wednesday.—Mr. HILL in the chair.

Mr. T. E. BIGGS (secretary) read the notice convening the meeting, and the directors' report and accounts were taken as read.

The CHAIRMAN, in opening the meeting, said that the reports of the directors and the superintendent gave all the information the directors had, and, consequently, left him little to say. The board was disappointed that Mr. Stone had been unable to fulfil his promise of clearing enough of the soil from the bed-rock to have a site for a mill, but it would be seen from the superintendent's report that the shortness of the water season had prevented his doing this. A longer water season was anticipated at the beginning of the year, but the fall of snow having been very small the water season had been greatly curtailed. Had Mr. Stone been able to have made one more run there would have been space for the mill; so consequently after the first run in the next season there should be plenty of room to put one up. Mr. Stratton, one of the directors, had recently visited the property, and would be glad to give any information respecting it that shareholders might desire. In conclusion, he would formally move that the report of the directors be and is hereby adopted, and the accounts approved, which having been seconded by Mr. HALL, Mr. LETHBRIDGE suggested that probably Mr. Stratton would now give the meeting the result of his recent visit.

Mr. STRATTON stated that he had thoroughly inspected the property, and was well pleased with what he saw there. He then explained the plan of working the mine, but which would be unintelligible without the plan printed with the report. He said there was not the slightest doubt of the richness of the property, which covered 75 acres of ground, and the gravel was from 200 to 250 ft. in depth, and it would take at least 20 years before it could be all washed.

Mr. LETHBRIDGE enquired if he was satisfied that the gold existed in quantity? Mr. STRATTON replied that there was no doubt of its existence in large quantities, and each drift run for blasting purposes had hitherto improved in richness, and there was no doubt that the ground contained millions of dollars of gold, and it appeared as if we were now about to get it. He was glad to have seen the property, and thought a director should visit the property occasionally. He had every confidence in Mr. Stone.

A SHAREHOLDER observed that the company was particularly fortunate in having had the property visited by three members of the board, all of whom thought highly of the company's prospects.

The resolution was then put, and carried unanimously, as also were those relating Mr. Lord as a director and Mr. Ashmead as auditor.

A vote of thanks to the Chairman concluded the proceedings.

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FOUR MINES CERTAIN FOR A RISE.

Date.	Mines.	Lead.	Ores.	Tons.	Price per ton.	Purchasers.
Oct. 28	Rochope	40	.....	£ 3 19 6	.....	J. Dinning.
Nov. 4	Grogwinion	100	.....	9 6 0	.....	Nevill, Druce, and Co.
5	Prince Patrick	15	.....	10 1 0	.....	Quirk, Barton, and Co.
6	ditto	3	.....	12 16 0	.....	ditto
7	Tankerville	80	.....	9 18 0	.....	Nevill, Druce, and Co.
8	ditto	20	.....	8 13 0	.....	ditto
8	South Darren	40	.....	14 12 0	.....	ditto
HORNACHOS (Silver-Lead).—This company sold on Nov. 4, 11 tons 5 cwt., for 34s. 7s. 1d., to Messrs. Nevill, Druce, and Co.						

BLACK TIN.

Date.	Mine.	Tons.	q. r. lbs.	Price per ton.	Amount.	Purchaser.
Oct. 30	Wheal Coates	6	17 1 3	.....	£35 0 0	Daubus.

Notices to Correspondents.

* * Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

SCOTTISH AUSTRALIAN MINING COMPANY.—One or two slight errors crept into our report last week of the proceedings at the general meeting of shareholders. It was stated that 20,000 more tons had been sold in the half-year as compared with the previous half; it should have been as compared with the corresponding half of the previous year. It should also have been stated that the quantity sold in July last was 17,332 tons, and in August 22,221 tons, which was 14,400 tons more than in the corresponding two months of the previous year.

MANGANESE.—"D. C. A." (Highbury).—The statistics asked for shall, if practicable, be obtained. The price of manganese has not varied much for the last few years. Few purchasers now care for mineral below 70 per cent. peroxide, although some years since, when Messrs. Fennie had the monopoly of the trade, 64 per cent. peroxide was made the standard. The present average price may be estimated at 80s. to 85s. per ton for 70 per cent., and 2s. 6d. per cent. up or down. The market is well supplied.

"Emigrant."—The fastest voyage on record from Australia to England was made by the *Chimborazo*, which left Adelaide on July 2 and arrived at Liverpool on August 11, this year. The average journey from Melbourne is about 65 days.

A review of Mr. H. Hussey Vivian's "Notes of a Tour in America" will appear in next week's Journal.—Several other matters are also unavoidably postponed.

IMPORTANT NOTICE.—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—In consequence of the new POSTAL CONVENTION, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one fourth. Henceforth the subscription will be 1l. 10s. 4d. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxembourg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Serbia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 1l. 19s. (50 frs.).

Received.—"Enquirer" (Paris): We will endeavour to ascertain the particulars, and publish them in next week's Journal.—"Constant Reader" (Louth).—"M.N."—"Shareholder" (Richmond).—"J. W."—"Shareholder" (Wheat Crebor).—"Subscriber" (Birmingham) should write to Messrs. Pixley and Abell, 27, Old Broad Street.—"F.R.S."—"Shareholder" (South de Erstby Mountain).—"Constant Reader" (Barnsley).

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, NOVEMBER 9, 1878.

THE ELECTRIC LIGHT.

METROPOLITAN AND OTHER IMPROVEMENTS, GAS COMPANIES, &c.

The views we recently gave in the Journal as to what the electric light was capable of effecting in many ways, we are glad to find, have in some important instances been fully endorsed on high authority. We pointed out in particular that the new light in all probability would be introduced into our mines, and would render explosions out of the question, seeing that it could in no way be affected by accumulations of gas, nor vice versa. Dr. HAWKLEY, it appears, is of the same opinion, for he states that the electric light can be so multiplied by reflectors as to brilliantly light the working places of mines, and so carry into the deepest recesses of the latest workings a light many times superior to that of the miners' lamp. We are told that, amongst other advantages, the electric light, though the beam traverses the densest bodies of gas, can never cause explosion or conflagration, and it cannot enable the miner to endanger a hundred lives for the selfish purpose of gratifying his taste for a pipe of tobacco, for there is no lock to be picked, wire gauze that can be struck, or lighted wick that can be exposed to the atmosphere of a working place, which may be filled, or partially so, with gas of a highly inflammable character. To accomplish this will be a matter of little difficulty, as we formerly pointed out, whilst there is no doubt whatever but what the owners of mines will cordially co-operate with the patentee, or patentees, of an invention that will ensure every safety not only to the men employed but to their property as well, and at the same time give them a brilliant light at a less cost than the present dim and dangerous one. It is well known that oil is a serious item of expenditure in the working of a mine, for the consumption is very large. In addition to it there is also the outlay for lamps, for glasses that are constantly broken, and the wages of lamp cleaners. In lamps alone, where it has been found desirable to change them, we have known 1000l. to be laid out for the purpose. Lamps under most favourable circumstances will be found necessary, but not to anything like the extent as at present. We are, of course, assuming that the electric light will be in every way successful, as we believe it will be, for the experiments made so far have been most satisfactory, although for good reasons we are not allowed to know all that it is capable of, or how the light can be best divided or adapted for the many purposes for which gas is now the only medium.

But the electric light we may say is far from being even a comparatively new invention. Dynamical electricity it has been shown can be produced in several ways. By SMEE'S mode electricity is generated or passed by a wire from the zinc to the silver. Its passage through a wire wound round a magnetised needle causes the needle to deflect, and so point to the telegraph, but if the wire is broken in the middle, and connected with two pieces of charcoal, the electric light is produced. As to its early introduction, we may say that about 47 years have elapsed since Professor FARADAY discovered that an electric spark could be produced by the sudden separation of a coiled keeper from a permanent magnet, but we are not aware that the valuable discovery then attracted much attention outside the circle of scientific men. It was, however, evidently not pushed so far as to cause it to be considered of sufficient value to be pursued for the purpose of seeing whether a light could be evolved from it that would tend in any way to make us less dependent on coal gas as an illuminating power. Still, the question of electrical light was not left unnoticed until within the last few years, for in 1858-9 Professor HOLMES devised a machine that was most successfully brought into operation at the South Foreland Lighthouse, where the light was the most brilliant ever displayed up to that time. After that GRAMME'S improved machine was introduced, we believe, in 1875 into this country by Mr. WERDERMANN, and exhibited in the Westminster Bridge-road. Driven at the rate of 400 revolutions per minute, it had a power equal to 500 Bunsen's cells, giving a light of great brilliancy. Again we find Mr. WERDERMANN in the front rank, and his display in the Euston-road on Saturday evening last was different in many ways. In his earlier experiments he adopted an arrangement of the carbons similar to that of the Jablockhoff candle, but on Saturday night he placed his negative uppermost, and gave it the form of a solid disc about 2 in. in diameter by less than 1 in. in thickness, this being fixed horizontally, and then the lower, or positive, electrode was placed vertically, and so pressed its upper extremity against the lower face of the disc. In the first instance the carbons are blunt, but are made pointed by the action of the electric current, which drives off the particles of carbon laterally with increasing force as the upper end is reached, so that the carbons terminate in a long delicate point. The light is produced by the incandescence of the tapering extremity and by the minute electric arc which takes place at the apparent junction of the two carbons. Mr. WERDERMANN on Saturday night lighted ten lamps with one divided circuit, each light being estimated at fully 40 candle power. The motive power employed was about equal to 2-horse power, from a small engine driving a Gramme electro-plating machine capable of depositing only 3 ozs. of silver per hour, the electro-motive force being equal to about four Daniell cells. The machine was by no means suitable, so a good deal of the power was lost. The Werdermann light, we may say, is soft, subdued, and steady, and only requires a clear glass globe for its protection. So far, then, the lights that have been exhibited in the Metropolis show that inventors are in the right path, although we are partly in the dark as to what has been accomplished by others who have been devoting their attention to electricity as a

means of superseding ordinary gas. But we may expect that before long we shall be enlightened on the subject, and that something approaching perfection will be arrived at.

The adoption of the light, however, will affect several interests, for electricity will be found particularly well adapted for lighthouse purposes, and there is no doubt but it will be taken advantage of by our railway companies. By it passengers will be able to have a brilliant light during the darkest nights, and it can be made to do double duty by not only illuminating the carriages but the line of railway itself, so that there will be less liability to accidents from collisions—a most important consideration. But there are many other purposes for which the electric light will be found applicable, so that its development would appear to be a question of time only. But of this we shall have more to say when the inventions of Mr. EDISON and others are made known, as we expect they will be shortly.

Considering the position of the Metropolitan Board of Works, it is highly to the credit of that body that they have shown every disposition to have the electric light fully tested, with the knowledge that its success would be somewhat inimical in the carrying out of the improvements in the Metropolis. By it, also, the Corporation of the City would be affected in its revenue. As we have before pointed out, the Metropolitan Board and the Corporation enjoy between them the dues paid on all coal entering London, and the sum so raised is a large one. The officers of the Corporation collect a tax of 1s. 1d. per ton on all coal arriving either by railway, sea, or canal, for special purposes, and they are entitled by Act of Parliament to do so until the year 1889. Of the sum named 4d. is taken by the Corporation for improvements within the limits of the jurisdiction of that body, and the remaining 9d. per ton is taken possession of by the Metropolitan Board of Works on account of the Thames Embankment and the General Metropolitan Improvement Accounts. The proceeds of the last year's collection has been specially hypothecated for clearing the Kew and some other bridges from toll and making them free, the same as was done with Waterloo Bridge a week or two since. Now, the coal tax last year realised no less than 465,382l., and the electric light, if brought into use, will certainly jeopardise a considerable portion of that sum, and the difficulty will be to obtain an Act of Parliament to obtain taxing powers to the same extent in connection with any article of general consumption. The Metropolitan Board, no doubt, has powers for levying a rate on property, and for borrowing money, but so much cannot be said with respect to the Corporation. That body will evidently lose a portion of the revenue from the coal dues in the event of the success of the electric light, and this is not likely to be made up from any other source. But assuming that the new light will for some time to come be confined to the lighting of the streets of the Metropolis, there will be a considerable falling off in the consumption, and, of course, in the dues. The light, however, will be for the benefit of the public generally; and, as is always the case in the event of any great change taking place, a comparative few may feel some injury at the commencement, but that will be more than counterbalanced by the beneficial results to the many.

The gas directors in the Metropolis have worked hard to assure their shareholders that they have nothing to fear from the electric light, and that at most it can only be carried out for lighting the streets, and that they will still have their really profitable trade left—the lighting of houses and buildings. The probability, however, is that when once the streets are lighted by electricity buildings and houses will follow in due time.

MINERS' PERMANENT RELIEF FUNDS.

Arrangements we are told have been made for holding a conference of the persons at present having the management of the various associations throughout the kingdom that have been established for the relief of those suffering from mining disasters. The gathering is to be held in Manchester, and is for the purpose of forming a National Permanent Relief Fund, or a federation of the different societies with a central fund to deal with disasters too serious to be dealt with by any one local organisation. We are not aware of the persons who have taken the initiative in the matter, although the scheme is something like that proposed by Mr. ELLIS LEVER, nor how it happens that the conference is to be held in Manchester. For several years past we have strongly urged the necessity that existed for the establishing of relief funds in the leading centres of all our mining districts, so as to do away with all appeals to the public for pecuniary aid, and on the occasion of all heavy colliery disasters. Had our views, persistently urged as they were, been carried out there would have been no occasion of late for begging for money throughout the country for the widows and children of those who were killed by recent colliery explosions. But the leaders of the working miners, looking a good deal to their own interest, and the formation of funds solely for trade purposes, in which they largely participated in the shape of salaries, travelling expenses, and similar items, entirely neglected to induce the men to make any provision for their families in the case of disablement, sickness, or death. At the same time they estranged the men as much as they could from their employers, so that the latter were not likely to put forward or help any scheme for the relief of those who might be left destitute owing to accidents whilst following their employment. But a different feeling now exists on the part of employers, who are desirous of doing all they can to promote thrifty habits on the part of those working for them, and induce them to make some provision for their wives and families in the event of their death. The result is that during the last few years several associations have been formed, the colliery owners subscribing most liberally, whilst the men have only to pay a small sum weekly. Amongst the most recently formed associations is that known as the West Riding of Yorkshire Miners' Permanent Relief Fund, to which large sums have been given by Earl FITZWILLIAM and other colliery owners, whilst some surpluses from former funds have also been handed over to it. We have been favoured with a copy of the rules as well as with other information respecting the association alluded to, and we incline to the opinion that the heads of it are not likely to join any national body, and we certainly think they would be right in so doing. National associations have been pet hobbies of the leaders of Trades Unions, more especially of those who have led the miners to so many disasters, and we have no desire to see a "national" in connection with funds raised for a much better object than the carrying on of a war against capital.

Some of the bodies already formed for relief purposes have large sums in hand, far greater than could be required for any catastrophe that could possibly take place, together with many thousands of members, so that a levy of only 1s. a week would more than suffice to keep well and comfortably upwards of 7000 persons. Now, we would ask can a National Association be of the slightest use to such a body as that we have described; or would the Northumberland and Durham Society, with its large fund and 70,000 members, be willing to contribute towards accidents in other districts where the men had been less provident? This we presume is what a Miners' National Permanent Relief Fund is proposed to be established for. In some districts we may also say accidents from explosions are of very rare occurrence, and where a fund is not really needed; yet we suppose such localities would be called upon to pay towards a National Fund—that is, both masters and men. If those who are now promoting the national movement really think that all persons connected with mining will join in such a project we believe that they will be greatly disappointed. The present associations are conducted by persons well known in each district, so that the working expenses are comparatively trifling. But a National Association, we suppose, would have a central staff with paid officials. The colliery owners, we believe, would not agree to any such proposal, but would do all they could for the district with which they are connected, and where their interest lies. We feel assured that the associations in the various mining districts are prepared to meet any contingency that is likely to arise, and from the communications addressed to us by many colliery owners we feel sure that the scheme, however philanthropically intended, will not be found to work. It is said that there has been an agitation in favour of a National Society, and if there has it has been one that

the parties most interested have been entirely kept in the dark. We suppose, however, that they will be enlightened on the subject when the meeting takes place and the names of the promoters made known.

RAILWAY IRON IN THE UNITED STATES.

It appears tolerably clear that there is a revival in the railroad interest of the United States. Partly owing to an improvement in business, partly owing to an abundant harvest, and partly owing to the establishment of more remunerative freight rates, most of the leading American railroad systems are enabled to present better traffic statements this year. Even the luckless Erie—now known as the New York, Lake Erie, and Western—has increased its net profits this year to the extent of rather more than \$1,000,000. The Baltimore and Ohio has resumed dividends upon its main stem stock at the rate of 8 per cent. per annum, payable, however, in new ordinary stock. The Pennsylvania, which sustained very great injuries and losses during the terrible riots which occurred at Pittsburgh and other towns in Pennsylvania in the summer of 1877, has also announced a resumption of dividends upon its considerable share capital at the rate of 4 per cent. per annum. The Northern Pacific, again—which has been in a state of suspended animation for the five long years which have elapsed since the great panic of 1873—is about to resume constructive operations between Bismarck and the Yellowstone, a distance of 200 miles. Such circumstances as these—and our illustrations might be greatly multiplied—serve to show that the American railroad interest is in a sensibly better position now than that which it occupied twelve months since, and that it is accordingly likely to consume larger quantities of railroad iron. It is especially likely to absorb a considerable amount of steel. It must be remembered that American railroads are in many cases very imperfectly constructed in the first instance, and that if they prove reasonably satisfactory financial successes, their road bed is materially improved afterwards. Upon such systems as the Illinois Central, the Pennsylvania, the Baltimore and Ohio, the New York Central, the New York, Lake Erie, and Western and the Chicago and North Western we may expect to see steel rails introduced upon all sections upon which there is at all a heavy traffic; and we believe it to be the fact that at the present time the steel rail mills of Pennsylvania are as actively employed as they well can be. Even iron rails, too—which can be still used to some advantage upon some of the less prosperous lines of the South and the extreme West—are in better request than they formerly were; and this improved demand will, it seems probable, continue for a further period.

It is not without interest to enquire whether the brightening prospects of the American iron trade will not exert an indirect influence for good also upon British metallurgy. We incline to think that they will. They will serve to render American competition less inveterate upon the principal markets of the world, and prices will probably be also strengthened to some extent. The panic of September, 1873, told very severely upon the American iron trade. The undue inflation of 1870, 1871, and 1872 induced too sanguine expectations among American ironmasters, and their means of production were increased to far too great an extent. When the panic occurred the revulsion was terrible, a very heavy amount of capital being embarked in the American iron trade. One consequence of the check experienced by American metallurgy was that American ironmasters exhibited much anxiety to open up new markets for their products in Australia, Canada, South America, and the West Indies. We do not say that this very natural desire to extend their business relations is altogether abandoned by American metallurgists, but it is clear that if they are better employed at home they will ask higher prices for their iron and steel; and this being the case, their competition will become less formidable, while there is also just a chance that a little British iron and steel may be enabled to find a sale upon American markets. We think, then, that the English iron trade has every reason to regard with satisfaction the change for the better which has taken place in the railroad interest of the United States.

THE FORTHCOMING MINERS' CONFERENCE.—IMPORTANT PROPOSITIONS.—The programme of the special conference of the miners of England, Scotland, and Wales, which is to be held in Manchester, in the Ardwick Town Hall, on Monday, Dec. 16, and the following days, under the presidency of Mr. Alexander Macdonald, M.P., has just been issued. The subjects to be discussed have been formulated under 18 heads, to be afterwards drafted into a Bill to be introduced by Mr. Macdonald. The first is a proposition that workmen shall not be allowed to enter a mine until it has been examined and reported to be free from any accumulation of gases. The next is that upon the appearance of gas in any working place the men shall be withdrawn from the mine until it has been examined and reported to be safe. The third is that no blasting powder shall be used in any mine unless the manager shall certify in writing that the particular part of the mine is safe. The fourth is that every chief manager shall be a trained and qualified viewing or mining engineer, whose duties shall be defined by the Bill. The under-manager is to hold a second-class certificate, and no under-viewer or under-manager is to be deemed the certified manager of the mine. Overmen, deputies, and firemen are to be subject to an examination as to their knowledge of gases. In the sinking of new mines precautions are to be taken, in advance of the general working, to drain off and exhaust all dangerous and explosive gases. All extensions of workings to be detailed on the working plan within one month of the time of the place being worked. The reports of examinations of mines to be made in a book accessible to the miners before proceeding to work. An important proposition is that which relates to the desirability of appointing a Minister of Mines. It is proposed that danger signals shall be placed in all the mining centres of the United Kingdom, showing atmospheric changes likely to affect the working of mines. That safety-lamps shall be examined before use, and that additional inspectors, to include competent working miners, should be appointed. With regard to fatal accidents, it is proposed that the mine shall remain untouched until visited by an Inspector, unless such non-interference should tend to increase or continue the danger. It is proposed to give power to the managers of mines in which explosive gases are known to exist to examine the clothes of workmen suspected of being in possession of anything likely to increase the danger of the mine. The other provisions relate to the weighing of the coal under the inspection of a check-weighman, to be appointed by the workmen, and to compensation to workmen in case of accident. No suggestion is made with regard to the latter. It is simply set down for consideration.

ACCIDENTS IN MINES.—It is gratifying to state that a truly philanthropic movement is now being pushed forward for the immediate relief of persons injured in mines. What is known as the St. John's Ambulance Association has been formed by the instruction of the Order of St. John of Jerusalem in England for the instruction of individuals in the method of tending and relieving persons injured by those accidents which are of frequent occurrence in times of peace. Classes are arranged to be open to any men who may be desirous of learning the first elements of the art of handling wounded persons, checking hemorrhage, and applying first dressing and bandages. There is probably no district where such knowledge is so desirable as in a colliery; one where under the most favourable circumstances accidents are of almost daily occurrence. We are, therefore, glad to hear that in the county of Derby, where collieries are numerous, several local bodies have been formed for giving the necessary medical information fitting them for giving ordinary persons who may be injured in mines whilst following their ordinary work. At Clay Cross there are the largest mines in this county, and three most efficient corps have been formed, and we understand, is capable of treating accidents of almost any kind in the first instance without having to wait the arrival of the qualified medical man. A few days ago there was a meeting in Chesterfield, where on the part of the Association, about a year and a half ago visited the Derbyshire Institute of Engineers for the purpose of drawing the attention of the members to a new ambulance wagon for the

conveyance, easily and painless, of persons injured, a most important object in a mining district, and the result was that many of the wagons had since been introduced into the neighbourhood. At Chesterfield, it was stated by Major Duncan, the pupils would be taught how to restore the apparently drowned or suffocated, how to carry an injured person so that a simple fracture might not become compound, how to check bleeding, and so on. He also expressed a hope that the President of the Mining Association (Lord Edward Cavendish) would invite designs for a simple method of carrying persons injured in the pits from the workings to the surface, for the shifting into the cage and again out of it at the top often did serious injury to the suffering persons. At Clay Cross it appears that the class consists of no less than 34 persons, who have reached a high state of proficiency, and were able to give their services whenever an accident occurred, whilst 15 of them had sent in their views with respect to an ambulance suitable for conveying persons injured from any part of the pit to the surface. We think we need scarcely say that the movement is one that should meet with the strongest possible amount of encouragement on the part of our colliery-owners, whilst ambulances should be provided at every mine, for nothing can be more torturing to an injured man than to be jolted home in a springless cart. Whilst prompt action after an accident in many instances would be the means of saving life. The movement is now making good progress; and, as showing the estimation in which it is held, we may state that at Chesterfield Lord Edward Cavendish said he purposed becoming one of the pupils.

DYNEVOR, DUFFRYN, AND NEATH ABBEY COLLIERIES COMPANY.—In the High Court of Justice on Monday this case came on upon an adjourned summons for the sanction of the Court to carry out an agreement entered into for a lease of the collieries to two persons who were willing to pay a rent of 5000*l.* A discussion upon this proposal was held during the vacation before the Vice-Chancellor, who came up to London expressly to hear the case. His Lordship then expressed himself in favour of sanctioning the scheme, but allowed the case to stand over till this day, in order that the parties might see if a better offer could be obtained. A meeting of the company had been held, at which a resolution was passed that the offer should be accepted, and the Court was now asked to confirm that resolution. Mr. J. Pearson, Q.C., and Mr. Romer appeared in support of the summons; Mr. Bristowe, Q.C., and Mr. Oswald appeared to oppose the application on behalf of Lord Lawrence, and other persons interested; Mr. Glasse, Q.C., and Mr. Cozen Hardy, Mr. Higgins, Q.C., Mr. McLara, Mr. Millar, Mr. Grosvenor Woods, Mr. Giffard, and Mr. C. James appeared for other parties. The Vice-Chancellor said it was evident that the cause of failure in this company was the great fall in the price of coal since the time when the collieries were first worked. It was now in such a position that the profits could be realised, and the creditors could obtain nothing. In such circumstances he considered that the offer which had been made to take a lease of the colliery at a rental of 5000*l.* was one which ought to be accepted, unless a higher rent could be obtained. And at a meeting properly convened for the purpose a resolution had been passed by a large majority for giving effect to the proposal. No higher offer had been made, and he was of opinion that the resolution should be confirmed and the agreement for a lease of the colliery should be carried into effect.

ROCK-DRILLS.—As many of our readers who have visited the Paris Exhibition, those interested in machinery cannot have failed to notice the extensive show of mining machinery and mineral products made by the Creusot, Angin, and Blanzky Works. Among the latter were six or eight of the Darlington-Blanzky rock-drills mounted on shaft sinking and level driving stands, just as they are worked at the Blanzky Collieries, where a considerable number are in operation. We are, therefore, glad to find that the jurors awarded a gold medal to Messrs. Chagot and Co. for their exhibit.

REPORT FROM CORNWALL.

Nov. 7.—There is decidedly a very much more hopeful and healthy feeling about the more immediate future of mining than there was even a few days since. On all hands we hear the belief expressed that the tide has at length indeed turned, and that although a rapid influx of prosperity may be too much to anticipate there is very little chance of a recession. It has certainly been a terrible struggle. How terrible none but those who have been personally concerned can say. Only two things have enabled mining to survive the strain—the indomitable pluck of the Cornish miner when he has fair play, and is not hampered by too often ignorant outside influences; and the continued and even enhanced richness of most of the working mines. If the depression in price had chanced to be coincident with a period of comparative barrenness in the yield of our pits—and such periods there have been—why then mining would have been well nigh, if not altogether, annihilated. Instead of that most of the mines have shown themselves richer than ever, and hence the ability to raise those enormous quantities of metal which even at low prices have enabled them to pull through so well as they have—in some cases, as at Tincroft, without discharging a single ton. The wealth of the bottom of Dolcoath has long been known; this week at the Mining Institute stones of very rich tin ore have been shown from the 215 fm. level at Wheal Agar; and generally it is that district the mines are looking well. Of course, there are exceptions, but they only seem to prove the rule that the deeper the mine the richer is the lode.

East Pool adventurers did a wise thing for themselves this week when they decided to be content with a smaller dividend, and wipe off their debit balance. They will do a good thing for themselves as well as for other people if they find out where the 20 tons of tin that they lost in the last three months. Nobody expects the produce from the stamps to agree to a pound with the result of the assay, but 20 tons in 12 weeks is a little too much to lose, and makes theory and practice in this business a great deal too divergent. Shall the more curious, if what is said is true, and it has not gone down the Red River. In that case we must presume that it has been appropriated by somebody. One hardly knows which alternative is preferable—to assume that it has been stolen, which, of course, implies neglect as well as dishonesty, or to conclude that it has gone off with the "very dirty water" which they use at East Pool, which implies decided want of skill in the conduct of the dressing operations. One way or another the point ought to be settled before the next meeting; and, if so, there are other mines that may probably be none the worse for the lesson. Twenty tons a quarter means all the difference between absolute loss and decent profit.

The Royal Cornwall Geological Society, which is the oldest of the kind in the provinces, has held its anniversary meeting, under the presidency of Mr. W. Warington Smyth, F.R.S. The proceedings were much scientific but of comparatively little practical interest. Mr. H. Collins, F.G.S., the first local geologist who has for many years dealt widely with stratigraphical questions, advanced reasons for believing that the rocks of West Cornwall are of Cambrian, or at least of pre-Silurian age, and thus discovered what may be a bone of contention for many years to come. Mr. W. C. Borlase, F.S.A., called attention to the feasibility of the use of pure tin in the manufacture of articles of domestic use, &c., and made out a very strong case. There is no reason why it should not be much more largely employed for such purposes than it is.

This week we have had the second annual exhibition of the Mining Institute (a notice will be found in another column), which has been attended by very marked success. From the first it has been the aim of those who have the conduct of the affairs of the Institute that they should thoroughly practical in its aim and character, and that they have succeeded even beyond anticipations. The exhibition was really exceedingly good, and far beyond what might have been anticipated; and the whole of the proceedings were alike well in earnest and utility, while means of social enjoyment were by no means overlooked.

Col. Beaumont, M.P., has sent one of his drills (the Beaumont

Percussive Drill) to the Show at Camborne. The drill shown has done, as appears by the ticket, a very large amount of work, and is still in perfect working order. It is justly considered that for practical purposes such an exhibit is far more instructive than a new machine.

There is a good deal of distress in some of the mining districts just now, in spite of the relief afforded by emigration; and Mr. T. B. Bolitho, as Chairman of the Distress Committee, has convened a private meeting of the Chairmen of Boards of Guardians in the county of the larger owners of mineral property to consider if any and what means should be taken for relief. The meeting is to be held to-morrow at Camborne.

THE CLEVELAND DISTRICT.

Nov. 6.—Since the date of my letter last month events of considerable importance have taken place in Cleveland. The steadiness which has been manifested in the district while commercial disaster has been happening on every hand is but another proof of the vigour remaining, now that the scum and froth is cleared away. Cleveland pig-iron makers have had a great deal to contend with since the announcement of the Glasgow Bank failure. Alarmist correspondents set afloat rumours affecting the stability of firms against whom not the faintest breath of suspicion had up to that time been raised—and the vagueness of the reports made them all the more damaging. At the same time, also, dark hints were circulated as to the position of one or two Yorkshire banks, having no more foundation than the fact that they had been involved in heavy losses two years since. All these rumours had a mischievous tendency, yet no unsteadiness has been manifested, and, though the banks are naturally more circumspect in their dealings now than they once were, it must be admitted that they are ready to give every legitimate accommodation. The Cleveland iron trade, which according to some was threatened with annihilation, has, on the contrary, assumed a much more important position than it has held for some time. The possibility that Cleveland iron can be converted into steel and sold at a price which will place it in the ranks of competition is already becoming almost a probability. If this point is reached, with the advantages of railway accommodation, a fine river, and a peculiarly happy situation, Middlesbrough must become highly prosperous even amid the general depression. Careless workmanship did quite as much to deteriorate the condition of the manufactured iron trade of Cleveland as the slackening of the general demand. And now, with the experience of past mischances, manufacturers pay close attention to their work, and pig-iron makers practice the closest economy. Altogether the district is on a hopeful basis. The returns of the Cleveland Ironmasters' Association for the month of October are as follows:—

MAKE OF CLEVELAND PIG-IRON.			
	Port of Middlesbrough.	Total of District.	
Month ending Sept. 30, 1878	108,202	134,479	
Month ending Oct. 31, 1878	110,055	137,302	
Decrease upon September, 1878	1,847	2,823	
MAKE OF OTHER KINDS OF IRON.			
	(including Hematite and Spiegel Eisen.)		
Month ending Sept. 30, 1878	31,216	31,216	
Month ending Oct. 31, 1878	29,858	29,858	
Decrease upon September, 1878	1,358	1,358	
Total make, September, 1878	139,418	165,695	
Total make, October, 1878	138,913	167,160	
Increase upon September, 1878	595	1,465	
SHIPMENTS FOREIGN OF PIG-IRON FROM THE PORT OF MIDDLESBROUGH.			
Month ending Sept. 30, 1878	34,034	34,034	
Month ending Oct. 31, 1878	28,590	28,590	
Corresponding month last year	31,624	31,624	
Decrease upon October, 1877	3,034	3,034	
COASTWISE OF PIG-IRON FROM PORT OF MIDDLESBROUGH.			
Month ending Sept. 30, 1878	32,002	32,002	
Month ending Oct. 31, 1878	33,718	33,718	
Corresponding month last year	43,312	43,312	
Decrease upon October, 1877	9,294	9,294	

MAKERS' STOCKS OF CLEVELAND IRON.			
	Port of Middlesbrough.	Total of District.	
Sept. 30, 1878	141,523	168,986	
Oct. 31, 1878	138,021	163,609	
Decrease upon September, 1878	3,502	5,377	
STOCKS IN WARRANT STORES.			
Public stores, Sept. 30, 1878	82,557	82,557	
Oct. 31, 1878	86,808	86,808	
Makers' stores, Sept. 30, 1878	35,481	35,481	
Oct. 31, 1878	40,187	40,187	

ABSTRACT.			
Increase in make of Cleveland iron upon September, 1878	2,823		
Decrease in makers' stocks upon September, 1878	5,377		
Increase in stock in public stores upon September, 1878	4,251		
Increase in stock in makers' stores upon September, 1878	1,728		
In N.E.R. Co.'s stores, 21,498 tons; in Messrs. Connal and Co.'s stores, 65,400—36,898.			

These figures show a state of matters which under the circumstances is far from discouraging, the actual increase in stocks being only 690 tons. When the amazing fall in the price of Scotch iron is taken into consideration it will be seen that Cleveland cannot expect to send as much iron to Scotland as was formerly the case. The small increase in stocks is, therefore, a very light matter.

A very important concession has been made by the North-Eastern Railway directors to the trades of Middlesbrough and district. About three weeks since an influential deputation waited upon the directors, and requested that they should make a rebate of 7½ per cent. upon the present freightage rates. This request has been considered by the directors, and they have replied in a letter signed by the secretary, as follows:—"The directors were assured that efforts were being and would continue to be made with all parties interested, including the owners of royalties and others, to make concessions so as to reduce the cost of production of pig-iron in the North-Eastern district, and that in asking the North-Eastern Railway Company to consent to the reduction in their present charges such reduction was sought for only as a temporary measure, and in the belief that it would tend to strengthen and maintain the present trade of the district. The directors under the circumstances above enumerated are prepared as an experiment to make a further allowance from November 1 to April 30 next of 7½ per cent. on the same traffic as is now subject to a similar rebate." It should be stated that about three years ago a reduction of 3½ per cent. on the rates then charged was made, and that is the rebate referred to in the letter just quoted. At one time the freighters of the district were exceedingly wroth with the railway company for their high charges and the small facilities given, and they even went so far as to form themselves into an association for the purpose of opposing the railway company in every possible way. The possibility of inducing some other railway company to come into the district and disturb the monopoly held by the North-Eastern Railway Company was even seriously contemplated. Now, however, the railway company show a laudable desire to meet the legitimate demands of the trade, and a very much better feeling exists. Since I last wrote the question of a reduction of the wages of ironworkers has been on the tapis. The employers took the initiative. A circular was issued by them about a fortnight ago calling a meeting of the Iron Manufacturers' Association for the purpose of discussing the wages question. The result of that meeting was a reduction of 5 per cent. on ordinary wages and 6d. per ton on puddling was demanded. Happily there exists in this district a Board of Arbitration, composed of an equal number of representatives of the employers and of the operatives. All questions in dispute between masters and workmen are submitted to the board, and are generally arranged without any serious dispute. Immediately upon the announcement of the action taken by the employers a meeting of the standing committee of the Board of Arbitration was called, and the workmen's representatives expressed their willingness to submit the question to arbitration. A meeting of the full board was held two or three days since, when Mr. David Dale, of Darlington, who has acted in a similar capacity on previous occasions, was unanimously requested to officiate as sole arbitrator. Mr. Dale has fixed Nov. 16

as the day on which he will hear the cases of both masters and workmen. Iron shipbuilding has been fairly well kept up during the month, and several very fine vessels have just been launched. The engineering trades are very well employed, and I hear of some good orders which are likely to come to the district. The South Skelton Mines, which belong to the trustees of Messrs. Thomas Vaughan and Co., in liquidation, and which were closed for some time, have now been re-opened, and are likely to be kept in full work. The Liver-ton Mines, belonging to the Liver-ton Ironstone Mining Company, in liquidation, are to be offered for sale, with all their appurtenances on Tuesday next.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Nov. 7.—Curtailment of production, especially in the pig-iron trade, marks business just now. The district through less is doing than was the case some little time back. There are exceptions to this state of things, but they are few. The puddlers at the Round Oak Ironworks of the Earl of Dudley commenced the week's work on Monday morning. This is a circumstance which has not occurred, perhaps, for two or three years past, the forges having been generally started on the Tuesday or Wednesday. The number of blast-furnaces blowing is set down at about 42, which is smaller than for many years past. Prices of raw and finished iron are without change.

The event of the week is the adjourned conference of representative colliery owners and miners' delegates and agents, which was held in private at Dudley on Tuesday. Mr. E. Fisher Smith again presided. There was a full attendance of operatives, but the attendance of employers was small, but influential. The men soon told the masters "it was impossible to convince the men to work nine hours a day." The masters then said they had nothing further to communicate, and the interview terminated. The coalowners, however, remained in consultation to decide, it is thought, what action shall now be taken. Until it becomes known what course the masters have resolved upon the coal trade, and indeed to a great extent the iron trade also, remains unsettled. The men have called a great conference of all the surrounding localities to be held in Wolverhampton on the 14th inst.

Wages matters have not been long in taking a definite shape in the Cannock Chase district. A joint conference of the coalowners and miners of that part of South Staffordshire has been held at Birmingham, and after a prolonged discussion the men were informed that in order to meet the lengthened depression in trade a reduction of wages and an increase of hours were absolutely necessary. The owners stated that they were prepared to continue working under the Birmingham agreement providing that the maximum and minimum clause should be abolished, and that the hours should be extended from eight to nine per day. The delegates promised to lay the proposal before their constituents, and to convey the decision of the miners on the 16th inst. It was arranged that the pits should continue working on the understanding that whatever terms might be agreed upon should date as from the 9th inst.

On Wednesday an important meeting of the Mines Drainage Commissioners was held in Wolverhampton. The chairman delivered an address dissecting the expenditure of the commission during the past year. The amount expended on surface works during the twelve months had been 18,658*l.*, and there was required to complete the works 38,850*l.* Mines drainage rates had been assessed to the total amount of 81,154*l.*, and there had been spent on mines' drainage account 128,415*l.* The Tipton Committee proposed to buy the Gospel Oak pumping-engine of Messrs. Aston and Grangebrook for 5000*l.*, but after much discussion the proposition was, upon the motion of Mr. Fisher Smith, referred back to the committee. The annual election of commissioners took place on the same day, when the retiring members were re-elected.

A draft mines drainage award for the district of Old Hill has just been made by the surviving mines drainage arbitrators. It is set forth that a rate will be required of 3d. per ton on fire-clay and limestone, and 6d. on ironstone, coal, slack, &c. The mines on the south side of the River Stour, and the mines in the Cradley Trough, together with the Saltwells and Dudley Woods collieries, are totally exempted from payment. In the cases of three other collieries graduation is allowed. The draft award is subject to appeals.

A slightly better trade is doing in North Staffordshire this week, but prices remain very low.

"Our competitors at home and abroad" was the title of a paper read before the South Staffordshire Mill and Forge Managers' Association, by Mr. Wm. Farnworth, manager to Messrs. E. P. and W. Baldwin, ironmasters, of Wolverhampton and Stourport. Savere competition at home was experienced, he said, from Cleveland and the West Coast, whose freights to London and Hull, and Liverpool, and to leading continental ports were so very much lower than were the freights from South Staffordshire to the same places. From Belgian and German ports iron was being sent into the Thames and the Humber at one-third the money it cost to convey iron from Wolverhampton to London and Hull. The competition of steel, it was pointed out, was serious, and threatened such common iron as was used for girders, as for such high class iron as was used for sheets, for stamping and turning, plates for boiler making and shipbuilding, and bars for working into anchors and the like. At so low a price were the Belgians now selling iron that it was pointed out that latens were being sold in Hull at 9*l.* a ton, though it cost 10*l.* a ton to deliver them there from the Belgian works; but Belgium had the advantages of lower wages from the ore to the finished sheet, and the workmen were content to labour from 6 on Monday morning till 12 on Saturday night. The prospects were discouraging so long as short hours and high railway tariffs were kept up.

LAMENTABLE ACCIDENT AT SANDWELL COLLIERY.—TWO MINING ENGINEERS KILLED.—An accident of an exceptionally distressing nature happened on Wednesday at Sandwell Park Colliery, resulting in the death of Mr. George Arnold and Mr. William Barker, members of the North Staffordshire Institute of Mining and Mechanical Engineers, then paying a visit to the colliery. The members of the Institute were taking their customary annual excursion, and had arranged to visit Sandwell Colliery in the morning, and then proceed to the open workings of the Earl of Dudley at Claycross, Coseley, and his lordship's Lye Cross pits at Rowley, but, owing to this unfortunate occurrence, the remainder of the programme was of course abandoned. On arriving at the colliery about half past nine o'clock, the party, numbering upwards of 60 gentlemen, was met by a deputation from the South Staffordshire and East Worcestershire Institute of Mining Engineers, consisting of the president, Mr. William North (Mayor of Dudley); the vice-president, Mr. H. Johnson; the secretary, Mr. A. Smith; and the council of the Institute. Mr. John Field, vice chairman of the board of directors of the Sandwell Company, received the visitors in the absence of Mr. James Bissell, the chairman of the company. After examining the surface plant and machinery the party descended the main winding shaft, and inspected the underground workings, consisting of about four and a half miles of roading in the Ten-yard coal. About twelve o'clock the party commenced to ascend. One detachment of eight gentlemen had been safely drawn up to the surface, and eight other gentlemen, including Mr. Arnold and Mr. Barker, then entered the cage. Scarcely had the cage started—the engine having only made one stroke—when Mr. Barker, it is supposed, became giddy, and losing his balance slipped off the platform. In doing so he grasped Mr. Arnold, who was near to him, and that gentleman was drawn with him, and both fell to the bottom of the shaft, a distance of about 20 feet. Mr. Barker fell into the cage hole, which contained about 18 in. of water, and he was almost immediately extricated, in a dying state, by those below. He had sustained a severe fracture of the skull and injury of the chest, together with a compound fracture of the leg. Mr. Arnold, whose skull was terribly fractured, died almost as soon as he was brought to surface, but Mr. Barker lingered in great agony for more than two hours. Mr. H. L. Browne, surgeon, of West Bromwich, reached the pit a short time after the accident, but his efforts were unavailing. The sad event was telegraphed during the afternoon to the friends of the deceased gentlemen in North Staffordshire, and information was sent to Mr. E. Hooper, Coroner for the district, who will hold an enquiry at the earliest possible moment into the circumstances of the accident. Much excitement was occasioned by the occurrence, and the tidings quickly spread through the district, causing a large number of persons to assemble in the vicinity of the pit. Considerable gloom spread over the members of the Institute at this unhappy termination of their anticipated excursion, and most of them soon returned home. It must be admitted that the accident is in no way attributable to the defective character of the winding apparatus at the pit, for the Sandwell Company have spared no cost to render the apparatus as perfect as possible. The apparatus consists of a double-decked cage, made to hold two trucks on each platform. The safety of the apparatus has been sufficiently tested in the past, about 300 men being lowered and raised every day, and upwards of a thousand persons, including ladies, have entered the mine for the purpose of inspection without a single accident. At each end of the cage is a protecting bar, about breast high, and the deceased gentlemen must have fallen between the bar and the platform. Mr.

Arnold, who was 45 years of age, was a wagon builder belonging to the Cliff Vale Wheelworks, and resided at Cliff Vale, while Mr. Barker was an engineer connected with one of the largest engineering firms in the north of the county, and was about 53 years of age.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Nov. 7.—It is rumoured that Lord Penrhyn has been offered by some London gentlemen one and a quarter million of money for the Penrhyn Slate Quarries—an offer that, notwithstanding the present condition of the slate trade, is not likely to be accepted. The Rhiwarth Slate Quarry, Llangynog, one of the oldest, and in some respects one of the best, in North Wales, has changed owners. It had been valued for ordinary business transfer, by three separate slate quarry authorities, at from 20,000 to 30,000, its yearly profit having of late been, it is said, 2000, with great capability of extension. Such, however, is the lack of enterprise in the country that a local engineer has succeeded, under mortgage exigencies, in buying it for a client for the sum of 4000. The scheme of a tramway to Llangynog, to which I have referred in recent reports, is now to be placed before the public. Of the 22 miles of land it will traverse 10 belong to Sir Watkin, who will render every facility in his power for the completion of the undertaking.

Two colliers from Plas Kynaston Colliery have been fined by the Wrexham magistrates for unauthorised charges that had missed fire. No improvement can be recorded in the Coal Trade. The aspect of the collieries and ironworks in South Shropshire is very depressing—chimneys without smoke, motionless pulleys and machinery, un-repaired buildings, grass and rust almost everywhere.

I am obliged by the notice taken of my remarks in last week's report by a correspondent from Truro. One does not like to discourage enterprise, but I cannot help observing that there are many lead mines prominently before the public whose future could be sketched with tolerable accuracy. North Wales seems likely to increase largely its production of blende. Taking the supply discovered at Morfa Du, and the prospective supply from Aberllyn, its returns will figure largely next year. Of the value of the discovery at the first-named mine there cannot be two opinions. But for evidence of the quantity to be returned by the latter we must wait for a time.

Mr. Halliday has written a long and patriotic letter to the local papers on behalf of the establishment of a National Relief Fund for miners, which should be largely supported by the outside public. Meanwhile the miners' employers and practical friends of the miner are progressing with permanent relief funds, which are primarily based on self-reliance.

The Pant-y-Mwyn controversy waxes long and loud in the Journal. My only contribution to it is the expression of my inability to understand the extreme desire of the owners to pourtray to the world the great riches they have discovered, and the fact that notwithstanding this partnership in these riches is so easily attainable. The lode has just been described to me as filled with carbonate of lime, with lumps of galena here and there throughout it. Is this a true description?

TRADE OF THE TYNE AND WEAR.

Nov. 7.—There is little improvement to notice in the Coal and Coke Trades. Now that winter really has set in after a summer protracted far beyond the usual length, some impulse has been given to the house coal trade, and prices of best quality are likely to improve a little. There is no change in the state of the steam coal trade, and the works on the whole are moderately employed. Only some of the best collieries, such as Cambria, are near fully employed. The exports to North-Eastern Europe will now fall off, and a dull trade for the winter may be looked forward to. The proposed reduction asked for by the steam coal owners of 12½ per cent., and an addition of one hour per day to the working hours, of course occupies the attention of the men; there is little doubt that they will accept some reduction in the rates of payment, as their average wages at present amount to 5s. per day, with the addition of house and fire coal, but they will be greatly opposed to any addition to the working hours. It may be useful to glance at the surprising changes which have occurred in the coal trade during the past few years. In 1870 there was nothing sensational about it; collieries favourably situated were fairly remunerative, but others, on which large sums had been expended, yielded only poor returns. Near the close of 1871 it became evident that a steady and rapid improvement had set in, and prices rose rapidly. In March, 1872, the miners received an advance of 10 per cent., and in March, 1873, total advances had been made of 50 per cent. on the rates of 1871. Soon after this the demand fell off, and reductions were made in wages as the price of coals fell. In the spring of 1874 10 per cent. was taken off the wages; in October of the same year there was a reduction of 14 per cent. Early in 1875 a reduction was made by the decision of Mr. Rupert Kettle of 10 per cent. In November of the same year another reduction was demanded, and on the decision of Mr. Horshell 8 per cent. was taken off on Jan. 31, 1876. Again, in October, 1876, there was a reduction of 7 per cent. The wages have, therefore, receded nearly to the level of 1871, but the coal trade is no doubt in a worse state than it was at that period. The men at the Radcliffe Colliery have come out on strike. The masters had given notice of a reduction of 25 per cent., which the men refuse to accept. It is likely that part of the Bebside Colliery will also be stopped shortly, owing to the depression of trade.

In Durham it is evident that there is no substantial improvement in the Coal and Coke Trades, as works continue to be stopped. The old Durham Colliery, which has been constantly kept going until lately, is to be closed. At the Broomside Colliery, after a strike of five months duration, the men have accepted a reduction of 8 per cent., and gone in. The masters at the outset wanted a reduction of 10 per cent.

A movement has been in progress some time which has for its object the reduction of mines' rents, both coal and iron, and in some cases arrangements have been made for their reduction. During the coal famine many royalties were leased at exorbitant rates—in some cases 1s. 6d. per ton having been paid for coal mine rents. These are, of course, much too high, looking at the present selling price of coals and coke. The lessees of collieries are, therefore, clearly entitled to some relief on this score—6d. per ton is now amply sufficient, and in cases where leases have expired a reduction of the rent per ton and also the permanent yearly rent will be sought for; but it is, no doubt, the duty and the interest of lessors to grant relief in many cases at the present crisis.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Nov. 7.—The few shareholders in the Newport (Old) Dock Company who met to-day at Newport had not much cause for congratulation. Since the establishment of the Alexandra Dock (at which, by-the-by, there is a talk of utilising the electric light), trade at the old dock has been falling off. There was no mention of any dividend in the report, and the sum of £7400 was ordered to remain to the credit of the general revenue account. It was stated that during the last few months trade had been improving a little, and also that negotiations were going on with the Great Western Railway Company with a view of increasing the facilities afforded.

A new trade has sprung up. For some time a steamer, belonging to Messrs. W. Y. Edwards and Son, has been running between New York and Cardiff, and has principally been engaged in bringing live cattle to the latter port. The firm named have met with so much success that they have built another steamer, and are building a further one, to run between the same places. Thus South Wales has now direct steam communication with America.

Vice-Chancellor Malins has consented to an application made in the Dynevor, Duffryn, and Neath Abbey United Collieries Company (Limited). His Lordship was asked to sanction the leasing of the colliery to Mr. Moore for a minimum rental of 5000, per annum—an arrangement which the majority of the debenture-holders had already approved of.

At the Ystradgynlais Petty Sessions Mr. Evan Foster, manager

of the Ystradgynlais Colliery, has been charged with a breach of the Mines Regulation Act. He was charged, first, with not supplying the workings with an adequate amount of ventilation, and, secondly, with not causing a true report to be made daily as to the condition of the workings. On Sept. 6 an explosion of gas occurred, by which six men were injured. Three days after Mr. Foster visited the colliery, and found an accumulation of gas, which Mr. Foster admitted had been there since the month of June. A fine of 20. 10s. was inflicted in each case, with costs.

At Mountain Ash it is rumoured that Messrs. Glasbrook and Co. have purchased the minerals under certain lands in the parish of Llanwano, and that sinking operations will commence next spring. Nothing of importance can be stated with regard to the Abercarn Colliery; there is believed to be a great disruption in the workings, and although operations are gone on with as quickly as possible, it is not known when the bodies can be brought out.

No good news can be stated as regards the Iron Trade, and never did prospects look gloomier. There is scarcely any demand for any description, even at the low prices which obtain, and which some say will have to go still lower before business can be improved. Masters, however, will, to say the least, ponder over the matter carefully before they submit to lower quotations, seeing that prices are now, in most instances, unremunerative. Several works are only just kept on the move. The demand for rails is decidedly sluggish; that for bars is inactive, and the same remark applies with equal force to pig-iron. Clearances during the week have been mainly to Port Chalmers and Tarragona. The steel trade is fairly active, there being a moderately good demand for rails at late rates. Tin-plates are quiet and unaltered.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Nov. 7.—Business at the ironworks in most parts of the county is still very dull, and the moderate demand there has been for pig fully justified the blowing out of some of the furnaces recently. But it may be said that the Derbyshire pig has sold as readily as other qualities, although at, perhaps, a little less money than some. But the low price at which iron is being sold shows that it cannot be made to pay a profit, and, with the exception of Cleveland and Lincolnshire, it can be produced in Derbyshire at a rate as low as in other districts. A great deal of the ore used is brought direct from Northamptonshire, where it is worked close to the surface, so that mining is out of the question, and although it has to travel a considerable distance yet the Midland gives a very reasonable rate. The consequence is that several of our ironmasters in the Chesterfield district and in the Erewash Valley prefer it to what can be raised at home. The Stanton Company, one of the largest we have, has leased some very extensive tracts of land for working the ore at Wellborough and other places, where last year was raised up to 170,000 tons. The company is now engaged in making some very large additions to the old works at Hallam Fields, that it is expected will find work for several hundreds of hands. At Sheepbridge there is less doing than for a considerable time past, whilst the Staveley Works are less busy than they have been. Foundry material is still in comparatively moderate request, and there has been a considerable decrease of late in the number of hands employed. At the collieries there is more activity, and the weather has sharpened the demand for house coal. An increased tonnage is going to the Metropolis from the leading collieries, via the Midland, and prices are better than they have been. More is also being done with Bristol and the West of England, and, in fact, with most places where there is direct communication by railway. Steam coal has in no way improved, but if anything the consumption has declined, both locally and for exportation. Small coal is not easily sold, even when offered at a really low price, owing in a great measure to the depression which prevails in most of our manufacturing districts.

THE COPPER TRADE.

Stocks in Europe—	Tons.
Chilones and regulus, Liverpool & Swansea (equal to fine).	5,365
Chili bars in Liverpool	17,848
Chili bars in Swansea	3,598
Chili ingots in Liverpool	—
Chili bars in Swansea	—
Foreign copper (chiefly Australian) in London	6,401
Chili bars and ingots and Barilla in Havre	9,117
Other copper in Havre	530 = 39,848
Afloat and chartered from Chili to Europe (advised by mail):—	
Ores and regulus (equal to fine)	2,022
Bars and ingots	5,961 = 7,983
Afloat from Australia (advised by mail):—	
Fine copper	327
Afloat and chartered from Chili to Europe (advised by cable):—	
Fine copper	3,400
Total	Tons 51,558

The suspension of payments by a firm who had large operations in this metal, and were supposed to have the control of enormous stocks, had the most depressing effect upon the market, and on its announcement the value of Chili bars dropped 2½ per cent., and subsequently even lower rates were accepted. As sales were not pressed, and it became rumoured that the stocks would be protected, prices rose to 60½, but again fell to 57½, at which the market closes buyers. Australian neglected, and English dull of sale. We quote—Chili bars, 57½; 5s.; Wallaroo, 67½; Burma, 64. 10s.; tough, 63½; manufactured, 68½; 70s.; ore, 11s. 6d. The imports and exports from January to September were, by the Board of Trade Returns—

	1878.	1877.	1876.
Ore ..	Tons 77,830	82,104	55,508
Regulus ..	25,115	25,226	22,810
Copper ..	30,692	30,520	29,330
Exports ..			
Foreign raw ..	9,440	10,631	12,774
English raw ..	14,198	7,787	9,711
Manufactured, including yellow metal and brass ..	30,178	21,300	17,700

London, November 7. FRENCH AND SMITH.

THE TIN TRADE.

During the first fortnight of October, under continued pressure to sell, values dropped until 52½. 10s. was touched. At 53½, large parcels changed hands, and the market being thus relieved, and buyers coming forward at advancing prices there was a rapid advance to 60½, at which the market closes firm with buyers present. The fall during the month was in no way attributable to the statistical position, which has considerably improved during the past month, the most marked features of which are—visible supply reduced; consumption increasing (the average deliveries being 1600 tons per month against 1500 tons per month last year); London stock stands at the same figure as last year, showing that during the past twelve months as much Straits and Australian have been consumed as have arrived. Australian production, about which so much interest centres, does not increase at the rate which some profess to believe. The shipments from Australia for England this year average 750 tons per month against 740 tons per month last year. As the year is drawing to a close a pretty correct estimate of the year's supply from this quarter can be formed, and from estimates we have received of the quantity available for November and December, we believe the total shipments will be rather under than over those of 1877. English was advanced to 65½ for ingots. Below we give our usual statistics:—

	1878.	1877.	1876.
Foreign in London	Tons 9,999	9,298	9,293
Banca in Holland	1,661	1,240	908
Bilbon in Holland	1,676	1,874	1,225
Afloat for Europe, Straits, advised by mail ..	200	240	150
Afloat, Australian ditto ..	1,650	1,910	1,400
Afloat, Bilbon ..	812	1,100	1,100
Banca in Dutch Trading Co.'s hands ..	977	1,112	908
Banca afloat, by sailing vessels ..	130	512	393
Total	17,405	17,154	15,405

Continued depreciation had occurred in copper for twelve months when October commenced, and as the price of Chili bars had reached 60½, it was thought by many that this metal at such a quotation was in a sound and lasting position, but from apparently unknown causes a continued receding of the market went on until 57½. 10s. only could be realised, and this only for limited quantities, when the sudden announcement of the suspension of a West Coast house, holding very large stocks of copper came upon the market as a great surprise; quotations immediately fell 2½ to 3½, all round, but even at this reduction business was not easy, buyers being alarmed as to the position of the stocks held by the firm liquidating. Confidence was subsequently given to the market on its becoming known that a considerable quantity of bar copper had been arranged for privately, and for the moment the price was pushed up to 59½, but this figure was never really the market value, and quotations very speedily receded to 57½, which is the present nominal value. English raw copper was weak throughout the past month, and is still so with a very limited demand. For manufactured business was also very limited, but since the close of the month more demand has been reported.

The yellow metal trade continues depressed. The price of sheathing was reduced ¼d. per lb. on Oct. 22, but the demand has by no means increased since the reduction. We subjoin our usual monthly statistics for the past four years.

The imports of copper into England for the first nine months of the following years were—1874, 56,025 tons; 1875, 60,591 tons; 1876, 59,201 tons; 1877, 69,411 tons; 1878, 66,131 tons. The exports for the same periods were—1874, 44,114 tons; 1875, 38,733 tons; 1876, 37,745 tons; 1877, 37,108 tons; 1878, 42,313 tons. The position from November 1, 1877, to November 1, 1878, was as follows:—

	Price.	Stock on hand.	Stock, including afloat and chartered.
1877—November 1	£ 55 10 0	Tons 31,454	Tons 31,454
December 1	63 10 0	30,701	30,701
1878—January 1	66 0 0	31,358	31,358
February 1	66 0 0	31,305	31,305
March 1	65 0 0	33,235	33,235
April 1	63 10 0	34,345	34,345
May 1	62 0 0	36,416	36,416
June 1	64 10 0	37,410	37,410
July 1	64 0 0	35,983	35,983
August 1	61 10 0	38,818	38,818
September 1	60 10 0	38,818	38,818
October 1	60 0 0	39,497	39,497
November 1	57 0 0	39,712	39,712

And the comparative positions at the same date of the past four years with the present:—

	Price.	Stock.	Stock, including afloat and chartered.
1874—November 1	£ 84 0 0	Tons 21,957	Tons 21,957
1875—November 1	82 10 0	23,549	23,549
1876—November 1	85 10 0	25,740	25,740
1878—November 1	57 0 0	39,712	39,712

The charters to Oct. 31, 1878, were 40,050 tons, against 36,000 tons in 1877. Leadenhall-street, London, November 7. HENRY ROGERS, SOXS, AND CO.

TEMPLE LEAD MINE—SPECIAL REPORT.

Oct. 31.—During the past six months the mining operations have been confined to the Temple lode, which in a former report was described as of greater value, as far as developed, than either of the lodes in the company's grant. Three adit levels or tunnels have been extended into the mountain on this lode in a direction averaging about 17° to the south of west. These levels are known as Nos. 1, 2, and 3. No. 1 being the lowest, is about 3 fms. above the bed of the River Rhedol. No. 2 is 6 fms. above No. 1, and No. 3 is 11 fms. above No. 2. The lode as far as at present explored appears to have an average and nearly uniform dip or underlie of about 1 in 6 south; its width varies considerably, and increases regularly as depth is attained.

No. 1.—The distance driven in this level is 40 fms., of which 23 have been driven during the past six months. Although this level has produced no lead of value it has passed through a very fine lode, composed of quartz and carbonate of lime, with clay-slate permeated with blende, copper, lead, and iron pyrites. A few thin veins further driving will bring the end of this level under the point where lead was discovered in the levels above, where a continuation of the course of ore may confidently be expected—in fact, during the last few days some fine stones of lead have been met with, clearly indicating the near approach to ore bearing ground.

No. 2.—The distance driven in this level is 54 fms., 18 fms. of which have been driven during the past six months, and for the latter distance has laid open a valuable course of lead that will on an average produce about 2 tons of ore per fathom; the present end of the level exhibits the lode equally good, and perhaps a little richer, than any other part of the mine, and as this level is the pioneer, or first driven, it is a very important point of operation, and its continuing productiveness will materially influence the future prospects and value of the property. A tramway has been laid down from the forebore of this level to the crushing-mill house in order that the ores may be conveyed with all practicable dispatch and economy.

No. 3.—The total distance driven in this level is 38 fms., 22 fms. of which is the work of the past six months. The course of lead here is of a very similar nature to that in No. 2, and for a length of about 20 fms. has produced an average of 1 ton of ore per fathom. In the present end of the level the lode presents a promising prospect, and is fully equal to the average value of the ore ground passed through by the level; a tramway has been laid down in the level for the expeditious removal of the ores and debris.

For the effectual ventilation of the mine, and for the more rapid extraction of the ores, a winze is being sunk by the side of the lode, which will communicate No. 3 level with No. 2; this is now sunk to a depth of 4 fms., and will be completed by the time it is calculated the dressing machinery will be erected and ready to work. In exploring the Temple lode two counter or cross lodes have been intersected; although in this district counter lodes are seldom met with, and still more rarely found to be productive, there is every indication of richness presented by one of these, upon which at a future time it is proposed to drive, not only that its value may be ascertained, but that the level may act as a cross-cut to explore the parallel lodes that are known to exist on either side of the Temple lode. In making the explorations by driving the different levels alluded to as little as possible of the ore ground has been broken, and no more lead than is absolutely necessary has been brought to the surface, it being considered desirable to postpone all stopping operations till the dressing machinery is completed and ready to work. Of course, considerable piles of rich ore have accumulated at surface, the whole of which has been produced from the levels alone.

The reserves, which are being increased rapidly by the produce of No. 3, and 3 levels in one ground, will be further augmented by the produce of No. 1, as soon as that level reaches the run of ore-bearing ground, which is but a few fathoms in advance of the end. The work that has been done underground during the past half year has added materially to the value of the mine, and the continued productiveness of the lode is particularly favourable to its future prospects. The surface operations during the past half year have been extensive, and carried on with great energy. Owing to the conformation of the surface of the ground, very considerable excavations have been necessary to provide a suitable site for the dressing floors, and the greater part of the excavations have had to be made in the solid rock of which the mountain is formed. The mine is nearly completed, and a very suitable platform of sufficient area is provided upon which to erect the machinery; a wheel-pit has been excavated in the solid rock to receive a water-wheel 30 ft. diameter 4 ft. breast, which has been erected, and will be used for crushing the ores; a powerful crushing mill has been erected in connection with this wheel, and a substantial mill house built. A second wheel (14 ft. diameter and 2 ft. breast), the pit for which is also cut in the solid rock, is being erected (in such a position as to be worked by the water after it has passed over the larger wheel) for the purpose of giving the necessary motion to the automatic dressing apparatus, round buckets, &c., all of which are in a forward state of preparation, and will be completed and erected at an early date as practicable.

A water-course has been made, partly by cuttings in the side of the mountain, and partly by aqueducts, over a distance of 1418 yards of such capacity as to convey an almost unlimited supply of water, that will not only give the necessary impetus to the water-wheels now erected and being erected but to any additional machinery that may at any future time be required for the purposes of the mine. The supply of water is obtained from the River Rhedol, and is brought to the dressing floors at a height of about 52 ft. above the level of the sea at that point. In order to provide the stone necessary for the buildings and wheel pits a large quarry has been opened, from which an unlimited supply may be obtained, and conveyed to the site of the dressing floors by the tramway which has been laid down by the company. The weather, which for a long time was favourable for surface operations, has during the past few weeks been less so; the works are, however, so far advanced that unless any unforeseen circumstance should occur, and delay them, they may be expected to be completed in about three months. The development of the property during the past six months to a great extent confirms the favourable predictions of the last report as to the future welfare of the company.

MR. MACDONALD'S ADVICE TO THE SCOTCH MINERS.

SR.—How long will it be before the working miners perceive the folly of Mr. Macdonald, and cease to contribute a portion of their hard-earned wages to the maintenance—nay, the luxury of such a man. His advice is to diminish the production of coals, iron, and, in fact, all commodities. Can he not perceive that this means lessened employment, and, of course, largely reduced wages? Why does he not tell the working men that cheaper production, not lessened quantities, must be the cure for the miserably depressed trade, which is patent to all? Why does he not tell them—“I can do you no good, and, therefore, I shall cease to draw my handsome salary?” This would be a straightforward and honest course. Let us see what he will do. AN EMPLOYER OF WORKING MEN.

London, Nov. 8.

GROGWINION.—100 tons of lead were sold, on Tuesday, at 9½ p. per ton. The monthly report states that the deep levels continue to open out in a most satisfactory manner, particularly the deep adit where the Nos. 3 and 4 lodes are developing some very productive ore ground, with every appearance of continuing for many fathoms in length and depth, this section of the mine being in entirely new ground, and with something like 100 fms. of backs overhead. The stopes in the upper levels have not of late been quite so productive as usual, but the manager expects that the new ground now being opened up will fully compensate for any falling off in the older portions of the mine. Stringent economies are being effected in the working expense; a further reduction of something like 20 per cent. in wages having just been effected at this mine, and at all other mines under Mr. Kito's management, which is, we understand, the third reduction that has been made since lead began to fall in value, so that when the much-hoped for revival does set in, the undertaking will be able to take full advantage of it. Miners' wages in the district are now so low that their average weekly earnings amount to only about 17s. 6d. per man. With labour at such a price, surely mineowners will greatly extend the development of promising ground, particularly as all mine material is so much cheaper than they have ruled for a very long period.

EGYPTIAN STATE-DOMAIN MORTGAGE BONDS.

ISSUE OF £8,500,000 FIVE PER CENT. BONDS.

His Highness the Khedive of Egypt, upon the proposition of his Council of Ministers and with the concurrence of the Commissioners of the Public Debt, having issued a decree authorising the above Loan, Mr. Rivers Wilson, C.B., the Finance Minister of Egypt, has contracted with Messrs. N. M. Rothschild and Sons, of London, and Messrs. De Rothschild Brothers, of Paris, for the issue of the Bonds. SUBSCRIPTION LISTS will be OPENED in LONDON, on MONDAY, the 11th November, and will be CLOSED on TUESDAY, the 12th November.

The price of issue is £73 for every £100 nominal capital, payable as follows:—£5 on application, £15 on allotment, £20 on 16th January, 1879, £20 on 17th April, £13 on 19th May—£73.

The first half-yearly Coupon, due on the 1st June, 1879, will be attached to the Scrip:—

Payment in full may be made under discount at the rate of 5 per cent. per annum, on any Monday or Thursday after the scrip has been issued.

The failure to pay either of the instalments will subject all previous payments to forfeiture.

Bonds will be issued, which, after payment of the last instalment, will be exchanged for the bonds as soon as they are ready for delivery.

The bonds, which will be issued to bearer in sums of £20, £40, £100, £200, £400, and £1,000, with coupons payable half yearly, on the 1st June and the 1st January, at the offices of Messrs. N. M. Rothschild and Sons, London, in pounds sterling; of Messrs. De Rothschild Brothers, Paris, at the exchange of 25 francs per pound sterling; and at Alexandria, at houses to be designated hereafter.

Applications for the Bonds must be made in the accompanying form. In case of allotment should require the whole deposit, the surplus will be returned; and if the deposit be insufficient to cover the first instalment on the amount allotted, the balance required must be paid forthwith.

In case of no allotment being made to the applicant the deposit will be returned. Subscription lists will be opened in London, Paris, Amsterdam, Brussels, &c.

The following is a translation of the decree mentioned above:—

We, the Khedive of Egypt. Having, under date of the 23rd of August in the present year, accepted the resolutions contained in the report of the Committee of Inquiry, and having signed our said acceptance to its Vice-President, Mr. Rivers Wilson, by our speech of the same day addressed to him and published in the Gazette of Egypt.

Considering that the members of our family mentioned in the two lists supplied by us to the Committee of Inquiry have surrendered all their real property, and that the same may be transferred to the State with the view of effecting a settlement of the financial condition of the Government on a stable and equitable basis, and the proposition of our Council of Ministers, sanctioned by us, and with the concurrence of the Commission of the Public Debt, have decreed and decrees as follows:—

Article 1st.—In the name of the above-mentioned members of our family, we hereby absolutely and in perpetuity transfer to the State all the real property belonging to them, and described in the third article hereof.

Article 2nd.—A loan for a nominal sum not exceeding £8,500,000 sterling shall be contracted for in the name of the State.

Article 3rd.—This loan will be secured on the property transferred by our family to the State, and consisting of 425,729 feddans of lands and houses. The net revenue of the said lands and houses amounts altogether to £422,426 sterling per annum, according to the estimate in the lists given to the Committee of Inquiry.

Article 4th.—In case the revenue of the said property should not suffice to meet the amount required for the service of the loan, the deficiency will be covered by the general revenues of the Government.

Article 5th.—Our Council of Ministers is hereby authorised to agree to and make the Finance Minister a formal mortgage on all the property transferred, as aforesaid, in favour of the contractors of the loan.

Article 6th.—In order further to secure the said loan, a Special Commission will be formed to administer the said property. The Commission will be composed of members, an Egyptian, an Englishman, and a Frenchman; and it shall be the direct control of the Council of Ministers.

The two foreign members will be appointed by us on the nomination of their respective Governments.

The functions of the said Administrators will be as follows:—

(a) To manage the property.

(b) To collect the revenues.

(c) To remit all the net revenues to the contractors of the loan.

Article 7th.—Our Finance Minister is authorised to settle with the contractors the terms of the loan, and to arrange with respect to the application of the even-annual revenue of the said property.

Article 8th.—Our Finance Minister is charged with the execution of this decree. Given at Cairo, this 26th day of October, 1878.

(Signed) ISMAIL, Khedive of Egypt.

(Countersigned) The President of the Council of Ministers, NUBAR.

The following letters have been addressed to Messrs. Rothschild.

SIR JULIAN PAUNCEFOTE TO BARON ROTHSCHILD, LONDON.

Foreign Office, October 22, 1878.

I am directed by Lord Salisbury to inform you that the French Minister for Foreign Affairs, after communication with the house of M. M. Rothschild in Paris, has proposed to Her Majesty's Government that the Daira lands recently transferred by the family of the Viceroy, which are to be hypothecated in security for the proposed Egyptian Loan, shall be managed by three persons, one of whom shall be an Egyptian, and the other two shall be nominated, one by the English Government, and the other by the French Government; and that the rents of the said land shall be remitted to Messrs. Rothschild, so far as may be required to keep up the interest and sinking fund on the Loan; and I am to say that Her Majesty's Government have assented to this arrangement.

The British Government do not accept any liability to pay in any contingency interest on this Loan; but they undertake this nomination in order to provide the creditors a security that the manager so nominated shall not be divested of the management of the property without their previous consent.

I am, Sir, your most obedient humble servant,

(Signed) JULIAN PAUNCEFOTE.

Baron L. Rothschild, &c.

M. WADDINGTON TO BARON ROTHSCHILD, Paris.

Paris, le 28 Octobre, 1878.

Monsieur le Baron, En vertu de l'entente établie entre le Gouvernement de la République Française et le Gouvernement de l'Égypte, le Khédivé vient de faire abandon, par acte du 26 Octobre, de la propriété des Daira, dont la gestion a été confiée à Messrs. Rothschild, à la Commission spéciale composée d'un délégué Français d'un Anglais, et d'un Égyptien; et il a été convenu, en outre, que les deux premiers seraient désignés par les Gouvernements respectifs. Cette Commission serait chargée de percevoir les revenus des biens que le Khédivé a cédés, et de les remettre à MM. de Rothschild jusqu'à concurrence de l'emprunt dont il s'agit.

Il est donc convenu que la Commission sera composée de trois membres, un Français, un Anglais, et un Égyptien, et que les deux premiers seront désignés par les Gouvernements respectifs. Cette Commission serait chargée de percevoir les revenus des biens que le Khédivé a cédés, et de les remettre à MM. de Rothschild jusqu'à concurrence de l'emprunt dont il s'agit.

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nominal capital of the above stock, on which the required deposit of five per cent., or £2, and agree to accept that amount, or any less sum that may be allotted to, and to pay the balance of such allotment according to the conditions of your prospectus of the 8th November, 1878.

Gentlemen, your obedient servant,
Name at length.....
Address

London, November, 1878.

SHROPSHIRE.

VALUABLE FREEHOLD ESTATE, called MEADOWTOWN.
In the parish of Worthen and county of Salop, situate about two miles from Worthen, four miles from Minsterley, and twelve miles from Shrewsbury, containing 56 A. 2 R. 12 P., in the occupation of Mr. Abraham Davies, WHICH WILL BE SOLD, BY AUCTION, BY

MR. WILLIAM HALL, at the George Hotel, Shrewsbury, on Monday, the 18th day of November next, 1878, at Two o'clock in the afternoon, and subject to conditions, and in Two Lots.
Lot 1.—All that FARM HOUSE, with buildings, fold, garden, meadow, pasture, and arable land, containing altogether about 49 A. 3 R. 20 P., in the occupation of Mr. Abraham Davies.
Lot 2.—All that piece or parcel of pasture and arable land called HILL PIECE, containing about 6 A. 2 R. 32 P.

The minerals under the whole of the property (except Lot 2) are leased to Major Brown and others for a period of 21 years, from the 25th day of March, 1875, at a royalty of one-twelfth, and a minimum or dead rent of £10 per annum. Great progress at a considerable cost has been made towards proving the land, and has resulted in the discovery of two very promising lodes, called the east and west lodes, the latter of which is believed to be the western extension of the Great Snailbeach lode, and where cut through it is at least 16 ft. wide, composed largely of pure carbonate of lime, spar, gossan, &c., with beautiful specimens of lead ore and blende. These highly favourable indications justify the opinion that a rich and valuable mine is here in process of development.

The timber will be included in the purchase.
Particulars, plans, and conditions of sale may be had of Messrs. HOWES and PERCIVAL, solicitors, Northampton; Mr. WILDING, solicitor, Montgomery; also of Mr. FARMER, land agent, Montgomery; and the Auctioneer, Shrewsbury (at whose offices the above lease may be seen), and at the place of sale.
The estate may be viewed on application to the tenant.

PART INTEREST IN SPLENDID SILVER MINE FOR SALE.
An INTEREST WILL BE SOLD FOR A SMALL SUM OF MONEY.
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HORIZONTAL ENGINE.

A STRONG, WELL-FINISHED ENGINE,
12½ inch cylinder, 2 feet stroke, with fly wheel, wrought crank shaft, 5 inch diameter, governor, and massive box bed.
Price £76.

ALEXANDER SMITH,
ENGINEER, DUDLEY.

18 H.P. PORTABLE STEAM ENGINE, with link motion reversing gear, ready for delivery; also gear to wind and pump.
A 9-h.p. VERTICAL STEAM ENGINE, with link motion, reversing gear (winding drum if required).
A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with carriage and travelling wheels.

Apply to—BARROWS AND STEWART, ENGINEERS, BANBURY.

THE FRONGCH MINE (LIMITED).
TOTAL SALES OF LEAD ORE TO PRESENT DATE, £530,945.

Capital £25,000, in 12,500 Shares of £2 each.

FIRST ISSUE 11,000 SHARES.

The company is fully registered under the Companies Acts, with Limited Liability.

BANKERS—THE ALLIANCE BANK (Limited), London.

SECRETARY (pro tem.)—MR. H. VERDEN.

OFFICES (pro tem.)—14, GREAT WINCHESTER STREET, LONDON, E.C.

Notice is hereby given, that the WHOLE of the FIRST ISSUE of 11,000 SHARES have been SUBSCRIBED FOR, and are now duly allotted.

Work at the mine is in active progress under the direction of Mr. J. Kitto.

By order.

THE

LAST CHANCE SILVER MINING COMPANY

OF UTAH (LIMITED).

FINAL ISSUE OF DEBENTURES, of £10 each, bearing interest at 10 per cent. per annum.

ONE HUNDRED AND FIFTY are now OFFERED FOR SUBSCRIPTION.

£3 payable on application, £3 on allotment, and the balance two months after allotment.

Efficient machinery is now erected and in thorough working order, and from the latest advices received from the Chairman at the mines will be raising ore within a very short time.

From the recent discoveries of gold in the adjoining mines, now being worked with great success by large Californian capitalists, and which veins exist in these mines, the Chairman is confident of speedy and great results.

The present issue is for the purpose of furnishing winter supplies.

The debentures are fully secured, being a first charge on the mines and other property of the company.

Forms of Application and full information can be obtained on application to the Secretary, at the offices of the company, 20, Great Winchester-street, London, E.C.

The DEBENTURE LIST WILL CLOSE ON THURSDAY, the 14th November.

RICHMOND CONSOLIDATED MINING COMPANY

(LIMITED).

44, Coleman-street, London, 4th November, 1878.

TO THE SHAREHOLDERS OF THE RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the Shareholders of the Richmond Consolidated Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on WEDNESDAY, the 13th day of November instant, at Twelve o'clock at noon, to receive the Report of the Board as to which of the recommendations of the committee they have carried out, and their reason for having deferred action on the remainder, if any; and to receive and take into consideration the reply of Mr. Edward Probert to the Report of the late Committee of Investigation; and for such other purposes as are set forth in the resolution adopted at the Extraordinary General Meeting of Shareholders held on the 2nd July last.

And notice is hereby further given, that in compliance with a requisition in writing, signed by a number of persons who, as registered members of the Richmond Consolidated Mining Company (Limited), hold not less than 2000 shares, or £10,000 stock, an EXTRAORDINARY GENERAL MEETING of the said Company will also be HELD at the place aforesaid, on the same 13th day of November, at One o'clock in the afternoon, or as soon thereafter as the business of the first named Extraordinary General Meeting is concluded, for the object of considering and, if deemed desirable, of passing the necessary resolutions under Article 66 of the Articles of Association of the company, for removing Messrs. Anthony Pulbrook, Colonel Frederick George Stewart, and Dr. Augustus K. Maybury, or any one or more of them, forthwith from the office of Director of the said Company, and appointing by an ordinary resolution other persons or other persons in the stead of all or any of the persons removed; and to adopt such other resolutions with respect to the subject matter of the said requisition as may be by the said Extraordinary General Meeting be deemed to be within the scope or meaning of this notice or of the requisition, a copy whereof is sent herewith.

And notice is also hereby further given, that the Transfer-books of the company will be closed from the 11th to 13th November instant, both days inclusive.

By order of the Board.

HUBERT AKERS, Secretary (pro tem.)

H. A. HASSALL,

NEW FERRY, CHESHIRE,

MINERAL BROKER AND MINING SHAREDEALER.

ALEXR. WILSON & CO., VAUXHALL IRONWORKS. LONDON, S.W.,

MANUFACTURERS OF

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THE EXCELSIOR DIRECT-ACTING
PUMPS.
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COMPOUND SCREWS ENGINES.
PATENT SURFACE CONDENSING
ENGINES.
PATENT PADDLE ENGINES.
HOISTING MACHINERY.



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as hand
labour.

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HAND & STEAM POWER
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PATENT PROSPECTING PLANT, &c.

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ENGINEERS AND CONTRACTORS,
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AND AT
21 AND 22, LINDENSTRASSE, BERLIN, S.W.

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AND
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Patent Round and Flat Wire Ropes,

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Cloth, Wagon Covers, &c., &c.

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UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
CITY OFFICE, No. 5, LEADENHALL STREET, E.C.

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ACCIDENTS OF ALL KINDS

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The Oldest and Largest Accidental Assurance Company.
The Right Hon. LORD KINNAIRD, Chairman.

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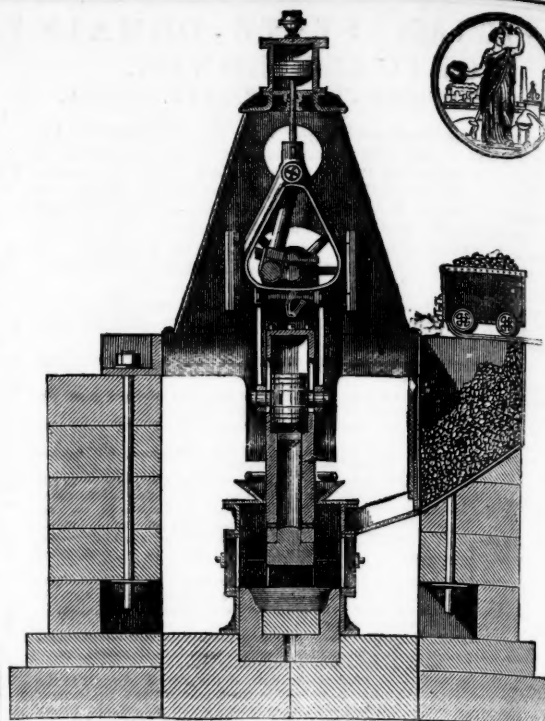
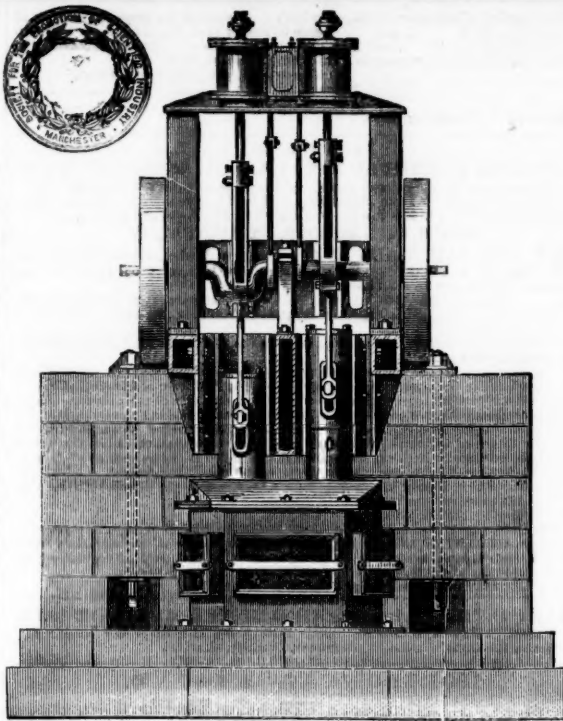
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WILLIAM J. VIAN, Secretary.

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on the Cause, Consequence, and Treatment of certain forms of Debility
and Nervousness, viz.—Mental and Physical Depression, Palpitation of the Heart,
Noises in the Head and Ears, Impaired Sight and Memory, Indigestion, Pains in
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Muscular Relaxation, Nervous Irritability, Rushing, &c., resulting from Exhaustion
of Nerve Power, effect of Overwork, City Life, Worry, Brain Toll, Intem-
perance, and other abuses of the system.
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For Pulverising Tin and Lead Ores, Gold Quartz, &c.,
SOLE MAKERS FOR CORNWALL,

N. HOLMAN AND SONS,

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All objectionable features of "wear and tear" common to the original and existing Pneumatic Stamps (driven by belts) are removed in this patent, and leather glands and stuffing boxes entirely dispensed with, the pneumatic piston being reciprocated into the compressing chambers by direct-action from without. These double machines are guaranteed to be of the capacity of 36 ordinary heads of cam and lifter stamps, and engineers will at once see that, inasmuch as the power is directly applied to its work (without the medium of belts and other gearing), the minimum consumption of coal (all other conditions being equal) must be the result.

The COST OF THESE MACHINES (including boiler) is about ONE-THIRD OF THE ORIGINAL CAM AND LIFTER STAMPS, to do the same work.

ROTARY STAMPERS SUPPLIED ON THE SAME PRINCIPLE, WITHOUT STUFFING BOXES OR GLANDS, WHERE RUNNING GEAR EXISTS, OR WITH HORIZONTAL CONDENSING ENGINES AND BELTS TO DRIVE THEM, IF PREFERRED.

Also, SOLE MAKERS OF STEPHENS' PATENT PULVERISER.
MINING AND OTHER MACHINERY CONSTANTLY ON SALE,
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RICHARD MOTTRAM, Secretary.

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- " THE DOWLAIS IRON COMPANY (LIMITED), South Wales.
- " THE EBBW VALE STEEL, IRON, AND COAL COMPANY (LIMITED), South Wales.
- " THE CRUMLIN VIADUCT WORKS COMPANY (LIMITED), South Wales.
- " T. T. J. WALLER, Esq., Railway Contractor, Gisburn, near Skipton.
- " TURNER AND SON, Limestone Quarries, Kiverton Park, near Sheffield.
- " THE CLIFTON AND KERSLEY COAL COMPANY, near Manchester.
- " THE ST. BRIDE'S WELSH SLATE AND SLAB COMPANY, Haverfordwest.
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- " THE MONTIPONI SOCIETY, Turin, Italy.

The following letter has recently been received from the Ebbw Vale Company:—
GENTLEMEN,—I have much pleasure in stating that in the execution of your contract to drive, for the Ebbw Vale Steel, Coal, and Iron Company (Limited), a cross measure Drift from the Old Coal to the Rock Vein Coal, in the Glyn Pits, at Pontypool, you did so with dispatch, and to the entire satisfaction of the concerned. The distance driven was 453 yards in about 13 months.
[The size of the above heading is 9 ft. by 13 ft.]
Yours faithfully,
ROBERT JORDAN, Mining Engineer,
Ebbw Vale Company's Collieries and Mines.

The "Burleigh" Machinery can be seen in operation at Manchester any time, by giving a few days' notice to the company.

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GUARANTEED NO INFRINGEMENT OF ANY PATENT.

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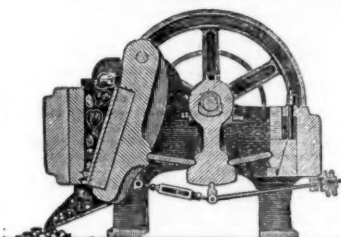
In competition with the best-known Stone Breakers,
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Formerly Manufacturers for the late H. R. Marsden, having made
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THE MINING SHARE LIST.

NON-DIVIDEND MINES.

IRON AND COAL COMPANIES.

BRITISH DIVIDEND MINES.

Shares	Mines	Paid	Last Div.	Clos. pr.	Total divs.	Per sh.	Last Div.
4000	Brookwood, c. Buckfastleigh	1 10 0	1	1	3 10 0	0 0 0	Nov. 1878
2000	Bryn Alyn, c. Denbigh	10 0 0	1	1	0 7 0	0 0 0	Jan. 1877
10000	Caron, c. Cardigan	2 0 0	2 1/2	2 1/2	0 4 0	0 0 0	Oct. 1878
1000	Carn Brea, c. t. Illogan	53 7 6	40	35 40	308 0 0	1 0 0	Feb. 1878
400	Cashwell, c. Cumberland	2 10 0	1	1	1 9 0	0 0 0	Aug. 1876
2450	Cook's Kitchen, c. t. Illogan	24 14 9	1	1	11 17 0	0 7 6	Jan. 1872
10240	Jeon Gt. Conyola, c. Tavitock	1 0 0	1 1/2	1 1/2	116 15 0	0 5 0	July 1877
4295	Doleath, c. t. Camborne	10 14 10	19	28 30	112 15 0	0 5 0	Aug. 1878
5000	East Black Craig, c. t. Scotland	8 0 0	1	1	0 10 0	0 0 0	Feb. 1877
300	East Darran, c. t. Cardiganshire	32 0 0	1	1	235 10 0	1 0 0	Aug. 1876
6400	East Pool, c. t. Illogan	0 9 9	9	8 1/2	15 13 3	0 1 6	Nov. 1878
40 100	Glasgow Carr, c. t. (30,000 £10, 10,000 15-p.)	1 0 0	1	1	0 13 10	0 0 6	Aug. 1878
7500	Gorseid and Merlyn Cons., c. t. Flint	2 10 0	4	3 1/2	24 5 0	0 5 0	Oct. 1878
5000	Great Lacey, c. t. Isle of Man	4 0 0	15 1/2	14 1/2	24 5 0	0 5 0	Oct. 1878
618	Gt. Retallack, c. t. Penzance	6 18 6	1	1	0 15 0	0 0 0	May 1878
5400	Green Hurth, c. t. Durham	0 8 0	1 1/2	1 1/2	0 18 0	0 0 0	Mar. 1878
5000	Grogwinion, c. t. Cardigan	3 0 0	2 1/2	2 1/2	0 14 10	0 0 0	Aug. 1878
9530	Guanishale (Clitters), c. t. s.	5 0 0	1 1/2	1 1/2	0 13 9	0 1 0	Oct. 1878
6000	Holmshale, c. t. s. Callington	1 0 0	1	1	0 4 6	0 0 0	Sept. 1877
2800	Ile of Man, c. t. Isle of Man	25 0 0	1	1	82 5 0	0 0 0	Sept. 1878
5000	Leadhill, c. t. Lanarkshire	6 0 0	2	1 1/2	0 15 0	0 0 0	Mar. 1878
400	Leiburn, c. t. Cardiganshire	18 16 0	50	40 50	596 10 0	1 0 0	May 1878
1400	Llanidloes, c. t. Montgomery	2 0 0	1	1	0 9 0	0 0 0	Nov. 1876
9000	Marke Valley, c. t. Linkinhorne	5 3 8	1 1/2	1 1/2	7 15 0	0 2 0	Jan. 1878
10000	Melland Copper, Hayle	2 0 0	1	1	0 5 0	0 0 0	Nov. 1878
5000	Minera Mining Co., c. t. Wrexham	5 0 0	10	8 10	67 17 0	0 3 0	Nov. 1878
2000	Mining Co. of Ireland, c. t. s.	7 0 0	1	1	23 17 0	0 2 0	Jan. 1878
444	North Bury, c. t. Chacewater	3 9 6	1	1	2 0 0	0 1 0	Nov. 1878
10280	North Hendre, c. t. Wales	2 10 0	1	1	2 7 0	0 1 0	Nov. 1878
3000	Panty Mwyn, c. t. Mold (8794 iss.)	2 0 0	5 1/2	4 1/2	0 3 0	0 0 0	June 1878
5000	Pentall, c. t. St. Agnes	0 8 6	1	1	0 9 0	0 0 0	Aug. 1877
5000	Pennant, c. t. North Wales	3 2 6	1	1 1/2	3 13 6	0 2 0	July 1878
45793	Pennant, c. t. Gwynedd	6 0 0	4 1/2	4 1/2	0 10 0	0 0 0	Mar. 1878
18000	Prince Patrick, c. t. s. Holywell	2 0 0	1 1/2	1 1/2	0 2 8	0 0 0	Nov. 1876
10000	Red Rock, c. t. Cardigan	1 0 0	1 1/2	1 1/2	0 14 0	0 1 3	Nov. 1876
12000	Roman Gravel, c. t. Salop	2 0 0	2 1/2	2 1/2	0 4 0	0 0 0	Nov. 1878
412	South Cardigan, c. t. Cleer	7 10 0	6 1/2	6 1/2	7 15 6	0 5 0	Mar. 1877
6123	South Conduff, c. t. Camborne	1 5 0	60	50 60	743 10 0	1 0 0	Sept. 1878
12000	St. Harmon, c. t. t. Montgomery	8 5 8	11	10 1/2	4 1 0	0 0 0	Sept. 1878
1 000	St. Pr. Patrick, c. t. (5000 sh. issued)	3 0 0	3	2 3	0 12 0	0 0 0	July 1878
4500	South Wh. Frances, c. t. Illogan	1 0 0	1	1	0 7 0	0 0 0	July 1878
1 2000	Tankerville, c. t. Salop	7 12 4	5 1/2	5 1/2	37 5 0	0 5 0	Sept. 1878
6000	Tinctor, c. t. t. Pool, Illogan	6 0 0	3 1/2	3 1/2	4 17 0	0 5 0	Dec. 1878
15000	Van, c. t. Llanidloes	11 10 0	10	8 1/2	50 8 0	0 5 0	May 1877
3000	W. Chiverton, c. t. Penzance	4 0 0	15	14 1/2	23 5 0	0 5 0	Oct. 1878
1785	West Pollice, c. t. Day	12 10 0	1	1	55 10 0	0 10 0	Feb. 1878
512	West Toldre, c. t. s. Day	11 0 0	1	1	1 19 0	0 10 0	Feb. 1878
2048	West Wical Frances, c. t. Illogan	95 10 0	44	39 41	32 0 0	0 1 0	Nov. 1878
600	West Wical Saron, c. t. Camborne	28 8 9	2	2 1/2	3 12 6	0 4 0	Oct. 1878
12000	West Wye Valley, c. t. t. Montgomery	47 0 0	8	8 1/2	446 0 0	0 15 0	Apr. 1878
1024	Wh. Eliza Conyola, c. t. St. Austell	18 0 0	2 1/2	2 1/2	0 12 0	0 0 0	Nov. 1877
2048	Wheel Jane, c. t. Kea	5 13 10	1	1	19 10 0	0 13 0	Aug. 1878
4295	Wheel Kitty, c. t. St. Agnes	5 4 6	1 1/2	1 1/2	8 5 0	0 5 0	July 1878
25000	Wh. Newton, c. t. s. t. Calstock	1 0 0	1	1	1 19 6	0 2 6	Dec. 1874
80	Wheel Pease, c. t. Redruth	173 15 0	20	15 20	0 8 6	0 0 0	Sept. 1878
6000	Wheel Prussia, c. t. Redruth	7 11 0	6 1/2	6 1/2	0 10 0	0 0 0	Aug. 1878
10000	Wye Valley, c. t. Montgomery	3 0 0	2 1/2	2 1/2	0 4 0	0 0 0	Oct. 1878

FOREIGN DIVIDEND MINES.

Shares	Mines	Paid	Last Div.	Clos. pr.	Total divs.	Per sh.	Last Div.
80000	Almaden, c. t. Spain	2 0 0	1 1/2	1 1/2	1 19 0	0 0 6	Oct. 1878
80000	Almaden and Tinto Consol.	1 0 0	1 1/2	1 1/2	0 6 0	0 0 0	Nov. 1876
20000	Australian, c. t. South Australia	7 7 8	1 1/2	1 1/2	1 1 0	0 1 0	July 1878
10000	Battle Mountain, c. t. (2424 part pd.)	4 0 0	1	1	0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, c. t. California	4 0 0	1	1	0 14 0	0 2 6	June 1878
20000	Cape Copper Mining, c. t. Africa	4 0 0	1	1	32 5 0	0 17 6	June 1878
24438	Cedar Creek, c. t. California	8 0 0	29	27 1/2	0 6 0	0 2 6	June 1878
85000	Cesena Sul. Co., Romanga, Italy	10 0 0	1	1	0 18 0	0 2 0	Nov. 1878
15000	Chicago, c. t. Utah	10 0 0	1 1/2	1 1/2	2 8 0	0 4 0	Nov. 1878
65000	Colorado United, c. t. Colorado	8 0 0	1 1/2	1 1/2	0 13 6	0 4 0	Jan. 1878
10000	Copago, c. t. Chili (240 shares)	18 16 0	2 1/2	2 1/2	7 11 0	0 4 0	Mar. 1877
60000	Don Pedro North of Key	0 16 0	1	1	2 5 0	0 2 0	Mar. 1877
28500	Eberhardt & Aurora, c. t. Nevada	10 0 0	1	1	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, c. t. S. Aust.	2 10 0	1 1/2	1 1/2	2 15 0	0 1 0	Nov. 1877
85000	Flagstaff, c. t. Utah	10 0 0	1 1/2	1 1/2	4 2 0	0 5 0	July 1877
20000	Fortuna, c. t. Spain	2 0 0	4 1/2	4 1/2	7 3 0	0 4 0	Oct. 1878
55000	Frontino & Bolson, c. t. New Gran.	2 0 0	2 1/2	2 1/2	0 2 6	0 1 6	Oct. 1878
20 000	Gold Run, c. t. Idaho	1 0 0	2 1/2	2 1/2	0 2 6	0 1 6	Oct. 1878
80000	Kapunda Mining Co. Australia	1 0 0	1	1	0 2 4	0 0 8	June 1878
20000	Last Chance, c. t. Utah	8 0 0	1 1/2	1 1/2	0 14 0	0 2 0	July 1878
15000	Llaneros, c. t. Spain	3 0 0	4 1/2	4 1/2	17 10 4	0 2 0	Oct. 1878
65000	London and California, c. t. t.	2 0 0	1 1/2	1 1/2	1 0 0	0 1 0	July 1878
7837	Lusitanian, Portugal, c. t. s.	3 10 0	1	1	0 5 0	0 1 0	July 1878
5000	Mammoth Copperopolis of Utah, c. t. s.	10 0 0	1	1	0 4 0	0 0 0	Dec. 1878
8000	Mountain Chief, c. t. Utah	10 0 0	1	1	25 19 11	0 11 1/2	Jan. 1878
10000	Portgibaud, c. t. France	10 0 0	28	26 28	6 11 0	0 10 0	Nov. 1878
100000	Port Phillip, c. t. Clunes	1 0 0	1	1	0 4 9	0 1 0	Nov. 1878
54000	Richmond Consols, c. t. Nevada	8 0 0	10 1/2	9 1/2	0 4 9	0 1 0	Nov. 1878
40000	Santa Barbara, c. t. Brazil	0 10 0	1 1/2	1 1/2	0 4 9	0 1 0	Nov. 1878
120000	Scottish Australian Mining Co., New	0 10 0	1 1/2	1 1/2	16 per cent.	May 1878	
122 000	Sierra Buttes, c. t. California	2 0 0	1 1/2	1 1/2	1 18 0	0 1 0	May 1878
140625	S. B. Plumas Eureka	2 0 0	1 1/2	1 1/2	1 18 0	0 1 0	May 1878
20000	St. John de la Cruz, c. t. Nevada	8 0 0	1 1/2	1 1/2	0 14 2	0 2 0	Apr. 1878
250000	St. John de la Cruz (25 stock & multiples deals)	8 0 0	1 1/2	1 1/2	1 18 0	0 1 0	Apr. 1878
20000	Tollma, c. t. Mexico	5 0 0	1	1	0 12 6	0 0 7 1/2	May 1874
25000	Victoria (London), c. t. Australia	1 0 0	1 1/2	1 1/2	0 12 6	0 0 7 1/2	May 1874
15000	Western Andes, c. t. New Granada	8 0 0	1 1/2	1 1/2	0 12 6	0 0 7 1/2	May 1874
91000	W. Prussian (5500 pref. sh. 101 pd)	10 0 0	10 1/2	10 1/2	1 8 0	0 4 0	Oct. 1878

NON-DIVIDEND FOREIGN MINES.

		PAID.				LAST DIV.					
Shares	Mines	Paid	Last Div.	Clos. pr.	Per sh.	Last Div.	Clos. pr.	Per sh.	Last Div.	Shares	
12000	Argentine, c. t. Argentine Republic	5 0 0	1	1	1 19 0	0 0 6	Oct. 1878			10000	
3000	Bellavista, c. t. Peru (210 shares)	10 0 0	1	1	0 6 0	0 0 0	Nov. 1876			5182	
80000	Buen Vent, c. t. California	10 0 0	1	1	0 10 0	0 10 0	Nov. 1872			8000	
10000	Buen Ventura, c. t. Llanos de las Infantas, Spain (22 sh.)	5 0 0	1	1	0 14 0	0 2 6	June 1878			15000	
49938	Chunales, c. t. Nicaragua	0 5 0	1	1	0 6 0	0 2 6	June 1878				
15000	Condes of Chili, c. t. s.	2 0 0	1	1	0 18 0	0 2 0	Nov. 1878				
20000	English Australian, c. t. Victoria	8 0 0	1 1/2	1 1/2	2 8 0	0 4 0	Nov. 1878			4200	
85000	Exchequer Hydraulic Wash Co., California	6 0 0	1 1/2	1 1/2	0 13 6	0 4 0	Jan. 1878			00	
100000	Exchequer, c. t. California	1 0 0	1 1/2	1 1/2	7 11 0	0 4 0	Mar. 1877			4000	
40000	Holcombe Valley, c. t. California	1 0 0	1 1/2	1 1/2	2 5 0	0 4 0	Jan. 1878			39000	
8000	Hornachos, c. t. Spain	1 0 0	1 1/2	1 1/2	0 14 0	0 2 0	Nov. 1878			312	
12000	Hultafall, c. t. t. Orebro, Sweden	10 0 0	11	9 10	0 4 9	0 1 0	Nov. 1878			5000	
12000	Hunter Consolidated, c. t. Utah	5 0 0	1 1/2	1 1/2	1 1 0	0 3 0	July 1878			18000	
20000	Imperial Brazilian Collieries, Brazil	10 0 0	1 1/2	1 1/2	0 5 0	0 1 0	July 1878			8000	
7500	Isabelle, c. t. California (220 shares)	5 0 0	1	1	0 4 0	0 0 0	Dec. 1878			6000	
10 000	I. X. L., c. t. California	5 0 0	1	1	0 4 0	0 0 0	Dec. 1878			987	
60 000	Javali, c. t. Nicaragua	1 0 0	1	1	0 4 0	0 0 0	Dec. 1878			12000	
3500	La Mancha, c. t. Newfoundland	2 0 0	1	1	0 4 0	0 0 0	Dec. 1878			2000	
12000	Llaneros, c. t. s. Viscaya, Spain (22 shares)	10 0 0	1	1	0 4 0	0 0 0	Dec. 1878			10000	
75000	Malabar, c. t. Colombia (27185 issued)	1 10 0	1	1	0 4 0	0 0 0	Dec. 1878			8000	
40000	Malpaso, c. t. Colombia (7400 pref. shares, fully paid)	1 0 0	1	1	0 4 0	0 0 0	Dec. 1878			16000	
12000	Menzberg, c. t. Honnet, Germany	1 0 0	1	1	0 4 0	0 0 0	Dec. 1878			8000	
4588	New Bendberg, c. t. Germany	8 0 0	1	1	0 4 0	0 0 0	Dec. 1878			5000	
60000	New Quebrada, c. t. Venezuela	5 0 0	1	1	0 4 0	0 0 0	Dec. 1878			4000	
20000	New Zealand Kapanga, c. t. Coronado	5 0 0	1	1	0 4 0	0 0 0	Dec. 1878			10000	
3000	Oregon, c. t. Oregon, U.S. (preference shares)	5 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			10000	
50000	Panulillo, c. t. Chili (250000 debentures)	4 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			8000	
50000	Pasternau United, c. t. Italy	4 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			640	
25000	Pitangu, c. t. Brazil (incl. 6000 sh. £1 fully paid)	3 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			10000	
25000	Placerilla, c. t. California	0 8 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			1000	
50000	Providencia and New Rosario, c. t. Mexico	2 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			15000	
40 000	Ravenscliff, c. t. New Zealand; c. t. South Australia	0 5 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			12000	
5 000	Rica, c. t. Colombia (40000 issued)	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			6000	
23 181 000	Rio Tinto, c. t. s. Huelva, Spain	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			5500	
60000	Rosa Grande, c. t. Brazil (	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			7000
30000	Russia Copper, Orebun and Ufa	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			3000	
10000	Silver Plume, c. t. Colorado	10 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			12000	
20000	Tecoma, c. t. Utah	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			1000	
49174	United Mexican, c. t. Mexico	10 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			3000	
14000	Utah, c. t. Utah	29 0 3	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			5000	
50000	Yrreberg, c. t. Rheinbreitbach, Germany	5 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			4000	
5000	Yorke Peninsula, c. t. South Australia	2 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			2000	
54500	Yorke Peninsula, c. t. South Australia Preference	1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			1000	
		1 0 0	1 1/2	1 1/2	1 1/2	1 1/2	Nov. 1876			1000	